

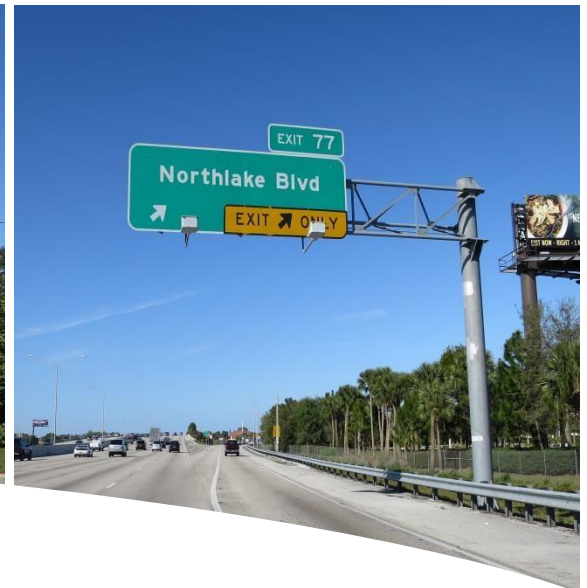
Project Development & Environment (PD&E) Study For SR 9/I-95 @ Northlake Boulevard Interchange Palm Beach County



Endangered Species Biological Assessment Draft

FM No: 435803-1-22-02

ETDM No: 14182



Florida Department of Transportation | District IV
3400 West Commercial Boulevard | Fort Lauderdale, FL 33309

August 2017

Endangered Species Biological Assessment Report SR 9/I-95 at Northlake Boulevard Interchange (DRAFT)

Palm Beach County, Florida
FM No: 435803-1-22-02 | ETDM No: 14182

Prepared for:



**Florida Department of Transportation
District IV**

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August 2017

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016, and executed by FHWA and FDOT.

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Executive Summary

This Executive Summary presents the key findings of the Endangered Species Biological Assessment (ESBA) Report supporting the proposed interchange modification for the SR-9/I-95 at Northlake Boulevard Interchange in Palm Beach County, Florida.

The Florida Department of Transportation (FDOT) District 4 I-95 Interchange Master Plan Palm Beach County Study (2015) identified the short-term and long-term needs for the I-95 Interchanges in Broward and Palm Beach Counties. The purpose of the I-95 Interchange Master Plan study was to develop design concepts to address traffic spillback onto I-95, improve interchange operations, reduce congestion, and enhance safety at these interchanges through the year 2040.

In July 2015, FDOT District 4 initiated the SR-9/I-95 at Northlake Boulevard Interchange Project Development and Environment (PD&E) Study. An Interchange Modification Report (IMR) was prepared as part of this PD&E Study focused on the development and evaluations of alternatives for the proposed improvements at the I-95 at Northlake Boulevard interchange.

The I-95 at Northlake Boulevard interchange is located along I-95 (MP 33.898 to MP 35.415) between the Blue Heron Boulevard (SR 708) interchange (1.76 miles to the south) and the PGA Boulevard (SR 786) interchange (1.73 miles to the north) within the City of Palm Beach Gardens in eastern Palm Beach County. The interchange is a typical diamond configuration. The land use in the area in the project area is generally residential and commercial retail. Population growth in the area is anticipated and regional modeling projections also predict increases in traffic.

The purpose of the project is to enhance overall traffic operations at the existing interchange of I-95 and Northlake Boulevard by providing improvements to achieve acceptable Levels of Service (LOS) at the interchange in the future condition (2040 Design Year). Conditions along Northlake Boulevard are anticipated to deteriorate below acceptable LOS standards if no improvements occur by 2040; the interchange will have insufficient capacity to accommodate the projected travel demand. As such, the proposed improvements at this interchange location will be critical in

1 supporting growth within the vicinity of the interchange and the overall vision of the City of Palm
2 Beach Gardens and Palm Beach County.

3 This Endangered Species Biological Assessment (ESBA) was prepared pursuant to the criteria
4 specified in Part 2, Chapter 27 of the PD&E Manual (August 2016). The objective of this document
5 is to present the findings of the protected species involvement and other wildlife that could be
6 affected by the proposed improvements to I-95 at Northlake Boulevard Interchange. This
7 evaluation was conducted in accordance with Section 7(c) of the Endangered Species Act (ESA)
8 of 1973, as amended (16 U.S.C. 1531 et seq.). The following information is provided to determine
9 the anticipated effects that the proposed improvements will have on federal and state endangered
10 or threatened species. State designated species of special concern were also considered.

11 The interchange is within the South Florida Ecosystem Management Area, the U.S. Fish and
12 Wildlife Service (USFWS) Consultation Area for the Florida scrub-jay, and the Core Foraging
13 Area of two active nesting colonies per USFWS database research. No suitable nesting or foraging
14 habitat exists within the project area for both the scrub jay and wood stork and these species were
15 not observed in the project vicinity during field reviews. Impacts to the wood stork CFA are
16 typically assessed by the USFWS relative to the amount and types of wetland impacts that occur
17 as a result of the proposed project.

18 It was determined by the desktop review and site visits that no jurisdictional wetlands occur within
19 the study limits, adjacent to the study limits or within the FDOT right-of-way. Therefore, no impacts
20 to wetlands will occur as part of the proposed improvements, regardless of the selected alternative.
21 Only very minor impacts to other surface waters are anticipated. Therefore, mitigation should not
22 be required. Minimal indirect effects from construction and no cumulative effects are anticipated
23 by the proposed improvements and mitigation of minor impacts to other surface waters should not
24 be required.

25 The project was reviewed through FDOT's Efficient Transportation Decision Making (ETDM)
26 process and presented on January 19, 2017 at the South Florida Water Management District
27 (SFWMD) Interagency Coordination Meeting. The final regulatory jurisdiction and impacts, will
28 be determined during final design through the environmental permitting process. The FDOT is
29 committed to coordinating with the regulatory agencies throughout the duration of this project.

30 Based on the background research and field and desktop reviews, no adverse effects to the manatee,
31 wood stork, Florida scrub-jay, least tern, black skimmer and Eastern indigo snake are expected by
32 the proposed project regardless of the selected alternative. This is primarily due to lack of natural
33 resources, species occurrence and suitable habitat in the project area. Furthermore, no direct,
34 indirect or cumulative effects to protected species are anticipated from the development of this
35 project.

36 The FDOT will continue to coordinate with the appropriate regulatory and permitting agencies as
37 required throughout the design/permitting and construction phases of the project. The final design
38 of the project require permitting, and best management practices will be implemented during the
39 project design and construction. No direct, indirect or cumulative effects to natural resources,
40 including wetlands and protected species, are anticipated from the development of this project and
41 the FDOT will adhere to any commitments deemed necessary by the regulatory agencies.

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Section 1

Project Summary

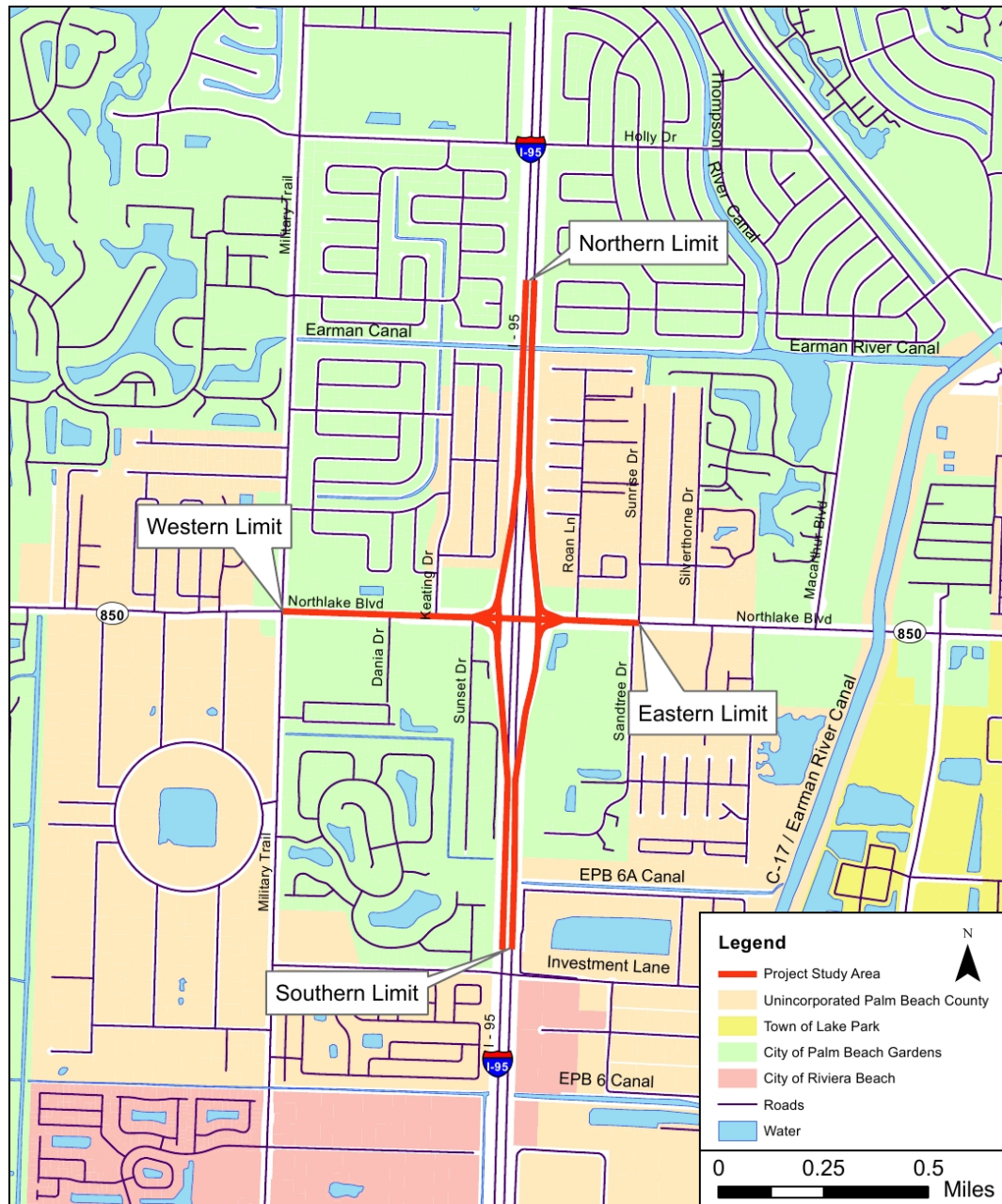
1.1 Introduction

The Project Development and Environment Study for SR-9/I-95 at Northlake Boulevard was programmed under Financial Management (FM) number 435803-1-22-02 and the Final Programming Report was published on 5/27/2015 under Efficient Decision Transportation Making (ETDM) number 14182. Below is the ETDM Project Description, Purpose and Need from the Programming Report with an update to ETDM in Sections 1.4 and 1.5; FDOT EDTM Report can be found in **Appendix A**.

This interchange improvement is one of the seventeen studied as part of the *I-95 Interchange Master Plan*. This plan will reexamine 1) the 2003 *I-95 Interchange Master Plan Study* and 2) the I-95 mainline project, which added a High Occupancy Vehicle (HOV) lane and auxiliary lanes from south of Linton Boulevard to north of PGA Boulevard in Palm Beach County and included minor improvements to eight interchanges. Overall, the *I-95 Interchange Master Plan* will recommend new short-term and long-term improvements to interchanges based on changes in traffic volumes and updated design standards.

The I-95 at Northlake Boulevard interchange is located on I-95 between the PGA Boulevard interchange (1.73 miles to the north) and the Blue Heron Boulevard (SR 708) interchange (1.76 miles to the south) within the City of Palm Beach Gardens in eastern Palm Beach County. This interchange project proposes to improve interchange operations to address traffic spillback onto I-95, reduce congestion, and increase safety. **Figure 1-1** shows the project location map and study area.

1



2

Figure 1-1 Location Map

Based upon the traffic operations documented in the I-95 (SR-9) Interchange at Northlake Boulevard in Palm Beach County Interchange Concept Development Report, the following preliminary short-term and long-term improvements were identified for this interchange and carried into this PD&E Study for consideration:

2020 Opening Year (Short-Term) Improvements

- Add an additional left-turn lane (triple) on the I-95 northbound off-ramp.
- Add an additional lane (dual) on the I-95 northbound on-ramp and an auxiliary lane on northbound I-95 to accommodate a free-flow westbound-to-northbound right-turn lane.
- Add an additional left-turn lane (triple) on the I-95 southbound off-ramp.
- Add an additional westbound left-turn lane (dual) on Northlake Boulevard at Keating Drive.
- Restripe northbound approach of Gardens Towne Square (Keating Drive) to provide an additional left-turn lane (dual) and one shared through/right-turn lane.

2040 Design Year (Long-Term) Improvements

- Add an additional left-turn lane (quadruple) on the I-95 southbound off-ramp.
- Add one eastbound and westbound through lane to Northlake Boulevard from Military Trail to MacArthur Boulevard.
- Restripe northbound approach of Gardens Towne Square (Keating Drive) to provide an exclusive left-turn lane, one through lane and an exclusive right-turn lane.
- Add an additional eastbound left-turn lane (dual) on Northlake Boulevard at Sunrise Drive/Sandtree Drive.
- Add an exclusive southbound right-turn lane on Sunrise Drive at Northlake Boulevard.

I-95 is currently a ten-lane divided interstate freeway from north of the Blue Heron Boulevard interchange (southern limit) to north of the PGA Boulevard interchange (northern limit) providing four general purpose lanes and one High Occupancy Vehicle (HOV) lane in each direction. See **Figure 1-2**. Auxiliary lanes are also provided in both the northbound and southbound directions between PGA Boulevard to the north and Blue Heron Boulevard to the south. North of Northlake Boulevard, I-95 southbound provides one auxiliary lane between PGA Boulevard and Northlake Boulevard for a total of six southbound lanes. South of Northlake Boulevard, I-95 provides one auxiliary lane in each direction between Blue Heron Boulevard and Northlake Boulevard resulting in a twelve-lane section. The existing right-of-way varies as it approaches the interchange, but the typical right-of-way ranges from approximately 300 to 725 ft. As part of the Strategic Intermodal System (SIS) and one of two major expressways (Florida's Turnpike being the other) that connect the major employment centers and residential areas of Miami-Dade, Broward and Palm Beach Counties, I-95 serves an important role in facilitating the north-south movement of traffic in Southeast Florida.

- 1 Under the jurisdiction of Palm Beach County, Northlake Boulevard is a six-lane divided urban
2 other principal arterial. See **Figure 1-3**. Northlake Boulevard at the I-95 overpass has dual left-
3 turn lanes and a single right-turn lane in both the eastbound and westbound directions to access the
4 I-95 on-ramps. The existing right-of-way varies from approximately 150 to 200 ft west of I-95 and
5 200 ft east of I-95. Sidewalks and bicycle lanes are provided along both sides of Northlake
6 Boulevard within the area of influence.
- 7 The interchange at I-95 and Northlake Boulevard is a typical diamond configuration. Adjacent
8 accessible signalized intersections relative to this interchange are located at Keating Drive (west),
9 Roan Lane, and Sunrise Drive/Sandtree Drive (east). The interchange improvements (2040 Design
10 Year Recommended Improvements) are likely to require additional right-of-way. Based on the
11 Florida Department of Transportation's preliminary Long Range Estimate (LRE), the planning level
12 construction cost estimate for the improvements is estimated at approximately \$10.5 million.
13 Detailed cost estimates and right-of-way requirements are part of the Project Development and
14 Environment (PD&E) Study.

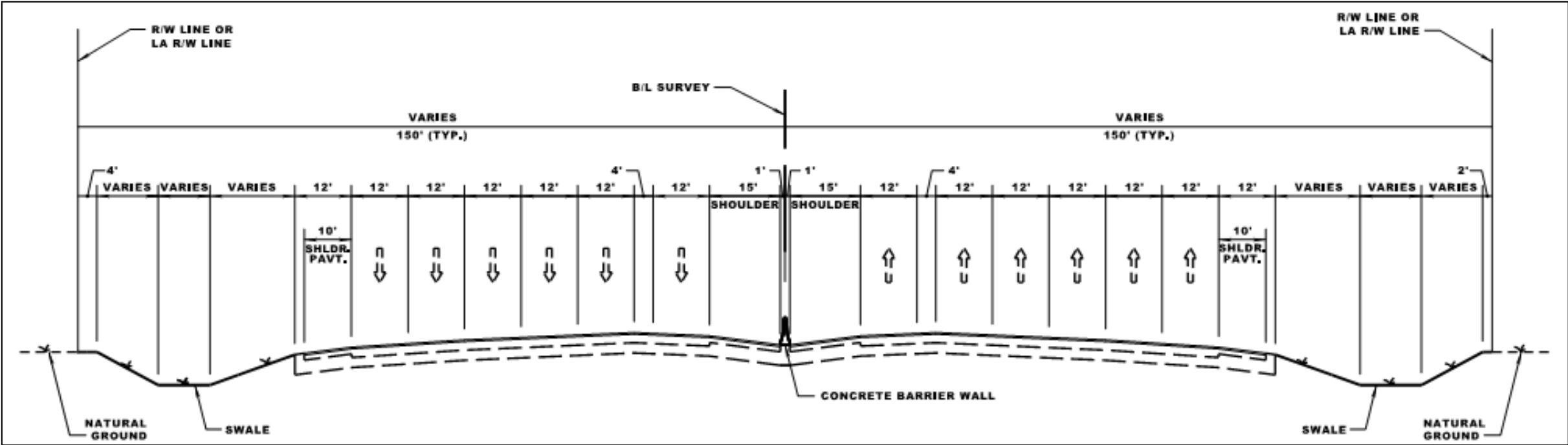


Figure 1-2 Existing Typical Section along SR-9/I-95 Mainline

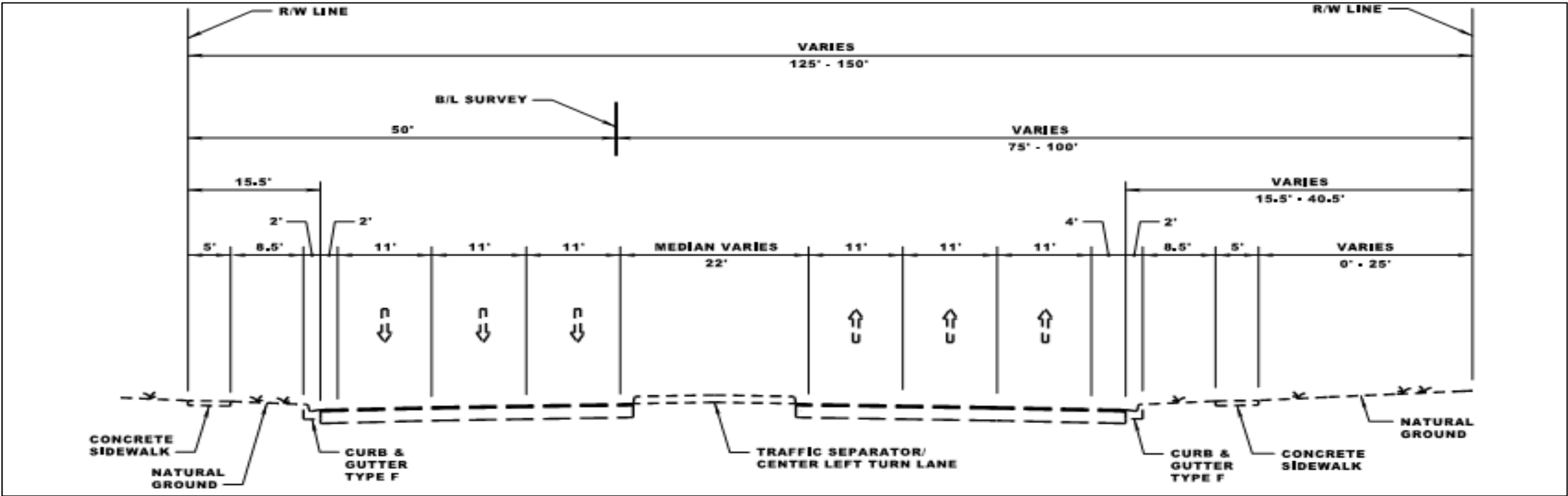


Figure 1-3 Existing Typical Section along Northlake Boulevard

Section 2

Purpose and Need

The purpose of the project is to enhance overall traffic operations at the existing interchange of I-95 and Northlake Boulevard by providing improvements to achieve acceptable Levels of Service (LOS) at the interchange in the future condition (2040 Design Year). Conditions along Northlake Boulevard are anticipated to deteriorate below acceptable LOS standards if no improvements occur by 2040; the interchange will have insufficient capacity to accommodate the projected travel demand. The purpose and need for the project is based on the following primary and secondary criteria, which was obtained from the Efficient Transportation Decision Making (ETDM) Summary Report (published May 2015).

2.1 Primary Criteria

2.1.1 Capacity/Transportation Demand: Improve Operational Capacity and Overall Traffic Operations (Level of Service)

The project is anticipated to improve traffic operations at the I-95 and Northlake Boulevard interchange and study area roadways/intersections by implementing operational and capacity improvements to meet the future travel demand projected as a result of Palm Beach County population and growth.

Based upon the traffic operations analysis conducted for the I-95 at Northlake Boulevard interchange and adjacent signalized intersections during the ETDM Screening and PD&E phase, the existing and future AM and PM peak hour traffic conditions for the five study intersections along Northlake Boulevard are shown in **Table 2-1**.

Table 2-1 ETDM Existing and Future Intersection LOS

Intersection	Existing Year 2012/2013				Future Year 2040 No-Build			
	AM		PM		AM		PM	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Keating Drive	C	23.4	D	47.9	E	59.1	F	102.2
SB Ramp Terminal	C	28.3	C	29.3	E	80.0	D	53.0
NB Ramp Terminal	D	53.2	D	36.0	E	60.4	E	78.5
Roan Lane	A	2.4	A	2.2	A	2.8	A	1.0
Sunrise-Sandtree Drive	D	35.6	F	80.7	F	83.2	F	103.8

Although all of the intersections along Northlake Boulevard (except Sunrise Drive/Sandtree Drive) operate at LOS E or better under existing conditions, it should be noted that several of the individual through and turning movements at the intersections (which include the I-95 on/off-ramp approaches) operate at LOS F during both the AM and PM peak periods. Without the proposed improvements, the intersections (except Roan Lane) are projected to experience excessive delays and operate at LOS F, which is below acceptable LOS standards, by the 2040 Design Year.

2.1.2 Growth Management: Accommodate Future Growth and Development

Commercial retail/office and residential land uses are located adjacent to the interchange. Commercial retail/office uses are located along Northlake Boulevard west of the I-95 southbound ramps. Predominantly residential uses are located to the west of Congress Avenue, while residential and commercial retail uses are located to the east of I-95. According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project area is to remain relatively unchanged.

The population within the vicinity of the interchange is anticipated to increase by 3% from 2005 to 2035, while the employment is expected to increase by approximately 96% from 2005 to 2035 northeast of the interchange. These projections are based on data derived from the Southeast Regional Planning Model (SERPM) Version 6.5 Managed Lanes Model (upgraded to include specific subarea improvements for the I-95 Interchange Master Plan).

As such, the proposed improvements will be critical in supporting growth within the vicinity of the interchange and the overall vision of the City of Palm Beach Gardens and Palm Beach County.

2.2 Secondary Criteria

2.2.1 Safety: Improve Safety Conditions

The *I-95 (SR-9) Interchange at Northlake Boulevard in Palm Beach County Interchange Concept Development Report* included a safety analysis of the project area. The following provides a summary of the crash data and analysis results for the three-year period from 2010 through 2012 for the ramp terminal intersections and approaches at the interchange.

There were 51 crashes in 2010, 54 crashes in 2011, and 48 crashes in 2012, to total 153 crashes. The predominant crash type is rear-end crashes accounting for 82 crashes (54%) of the total crashes.

FDOT's high crash location reports (for the period 2010 through 2012) provide those locations that have a higher crash rate as compared to crash rates for similar statewide roadways. The high crash locations along I-95 within the area of influence include:

- I-95 Northbound Off-Ramp (2011)
- I-95 mainline between mileposts 34.6 and 34.8 (2010)

The proposed improvements are anticipated to provide additional through and turn lanes, as well as interchange ramp improvements, to help reduce conflict points and the potential occurrence of collisions at the interchange.

2.2.2 Emergency Evacuation: Enhance Emergency Evacuation and Response Times

I-95 and Northlake Boulevard (from I-95 to SR A1A) serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management. Also designated by Palm Beach County as evacuation facilities, I-95 and Northlake Boulevard (from I-95 to SR A1A) are critical in facilitating traffic flows during emergency evacuation periods as they connect other major arterials and highways of the state evacuation route network. The project is anticipated to:

- Improve emergency evacuation capabilities by enhancing connectivity and accessibility to I-95 and other major arterials designated on the state evacuation route network from the west and east, and
- Increase the operational capacity of traffic that can be evacuated during an emergency event.

2.3 Update to the ETDM Purpose and Need: Capacity/Transportation Demand:

The traffic analysis conducted during the PD&E study further identified the long term deficiencies in the year 2040 and the need for operational improvements to meet the level of services standards. Delay extends up to two to three minutes at some intersections. In both the AM and PM peak hour, the southbound and northbound ramp terminals operate at level of service F. **Table 2-2** shows the existing and future LOS for No-Build conditions based on the analysis conducted during the PD&E IMR traffic analysis process. **Table 2-3** shows the I-95 exit ramp queuing up to 66% beyond the available ramp storage causing queue spillback onto I-95. The IMR is contained in the project file.

Table 2-2 Existing and Future No Build Intersection LOS

Intersection	Existing (2015)				Future (2040 No-Build)			
	AM		PM		AM		PM	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Military Trail	E	55.3	E	64.6	E	63.2	F	90.4
Keating Drive	B	17.5	D	44.3	E	73.6	F	142.0
I-95 SB Ramp Terminal	C	27.9	C	31.5	F	80.5	F	90.4
I-95 NB Ramp Terminal	E	59.5	D	47.5	F	103.9	F	123.4
Roan Lane	A	1.1	A	2.3	A	0.9	A	2.6
Sunrise Drive	E	62.9	E	68.8	E	70.7	F	98.6

Table 2-3 Existing and Future No Build Queue Length

Intersection	Existing (2015)		Future (2040 No-Build)	
	Maximum Queue Length	% Queue Greater than Existing Storage	Maximum Queue Length	% Queue Greater than Existing Storage
	ft	%	ft	%
I-95 Southbound Off Ramp	1608	53%	1746	66%
I-95 Northbound Off Ramp	1433	27%	1250	11%

2.4 Update to the ETDM Consistency with Transportation Plan Goals and Objectives

Project coordination occurred with the Palm Beach Metropolitan Planning Organization (MPO) technical committees and governing board, and several local municipalities. The result of this project coordination culminated with the MPO adopting and funding design, right of way and construction on June 15, 2017 through the approval of LRTP Amendment 5. Below are the three plans and programmed funds.

- 2040 Long Range Transportation Plan (LRTP) as amended 6/15/2017: Amendment #5: FDOT has identified specific SIS cost feasible projects and corresponding project costs in its "SIS FY 2019/2020 through FY 2023/2024 Second Five Year Plan" and its "SIS FY 2024 through FY 2040 Long Range Cost Feasible Plan." The LRTP has \$84,200,000

project funds programmed for Design (2015-2019), Right of Way (2020), and Right of Way and Construction (2021-2025).

- Palm Beach MPO Transportation Improvement Program (TIP) FY 2018-2022, Adopted 6/15/2017: Identifies project funds with \$5,100,000 for Preliminary Engineering in FY 2018, \$58,566,406 for Right-of-Way in FY 2020-2022, and \$15,050,388 (\$14,959 + \$91,200) for Construction in FY 2022 for total of \$84,248,427.
- The FDOT Current State TIP (STIP) FY 2018 through >2021 (6/27/2017): Identifies project funds with \$5,100,000 for Preliminary Engineering in FY 2018, \$61,463,486 for Right of Way in FY 2020 through >2021, \$15,050,388 for Construction FY >2021.

2.5 Alternatives Evaluated

The PD&E study process analyzed several factors related to the regional traffic growth, required traffic lanes to support the level of service standards, No Action and Build Alternatives to meet the required level of service standards, effects to the human and natural environment, costs and public comments.

2.5.1 No Build Alternative

The No-Build Alternative assumes that no improvements will be made in the study area and that existing conditions will remain. This alternative is often used to compare the costs and benefits of implementing proposed improvements versus the alternative of continuing to use the existing facility. For this study, the No-Build Alternative would mean that the I-95 and Northlake Boulevard interchange would remain a typical diamond configuration interstate facility and no improvements would occur along Northlake Boulevard. The No-Build Alternative will be considered a viable option throughout the PD&E Study.

2.5.2 Build Alternative 1 – Modified Concept Alternative

This concept will modify each off-ramp of the existing I-95 tight diamond interchange at Northlake Boulevard. The modifications will widen the existing dual left and right turn lane configuration to include a triple turn lane alignment for both left and right turning maneuvers. The terminal gore point locations on I-95 will remain unchanged. The existing I-95 bridge over Northlake Boulevard will remain unchanged.

This concept will also widen westbound (WB) Northlake Boulevard from three to four lanes between Military Trail and Sandtree Drive/Sunrise Drive. In addition, eastbound (EB) Northlake Boulevard will be widened from three to four lanes beginning west of Keating Drive to Sandtree Drive/Sunrise Drive. **Appendix B** depicts the conceptual layout for Build Alternative 1.

Based on the comprehensive evaluation of this PD&E Study, Alternative 1 has emerged to become the recommended alternative. Below are additional details of Alternative 1 proposed improvements:

- I-95 Off-Ramps will be widened to provide triple left turn lanes and triple right turn lanes; and the storage lengths will be extended.
 - For the I-95 northbound off-ramp, provide a second auxiliary lane for 1300 feet.
 - For the I-95 southbound off-ramp, provide a second auxiliary lane for 1300 feet.
- I-95 On-Ramps will have three lanes to receive one dedicated right turn lane and dual left turn lanes from Northlake Boulevard.
 - The I-95 northbound on-ramp has three lanes that will merge to two lanes, joining I-95 as two auxiliary lanes for 1200 ft, then merge to one lane after an additional 1200 ft lane, then merge into I-95 approximately 3500 ft south of the auxiliary lane taper for the northbound exit to PGA Boulevard.
 - The southbound I-95 three lane on-ramp will not change.
- The I-95 mainline bridge over Northlake Boulevard does not require modification.
- At the interchange, Northlake Boulevard will have four (4) through lanes in the eastbound and westbound directions, two (2) left turn lanes and a single lane free-flow right-turn lane to the on-ramps.
- Pedestrians have full mobility along Northlake Boulevard with signalized pedestrian crossings. Bicycle lanes are provided within the Build Alternative project limits on Northlake Boulevard.
- Northlake Boulevard will have one additional lane for eastbound traffic from west of Keating Drive to Sandtree Drive to maintain traffic flow through the I-95 terminals.
- Northlake Boulevard will have one additional lane for westbound traffic from west of Keating Drive to east of Sandtree Drive to maintain traffic flow through the I-95 terminals.
- At Sunset Drive, closure of the northbound right turn should be considered to reduce vehicle conflicts. Access from Sunset Drive to Keating Drive through the shopping center and right-of-way and joint-use agreements should be considered during the design and right-of-way phases.
- At Roan Lane the eastbound left turn, median opening and traffic signal is removed.

2.5.3 Build Alternative 2 – Diverging Diamond Interchange

This concept will reconstruct the existing I-95 tight diamond interchange at Northlake Boulevard to a diverging diamond interchange (DDI). The ramp lane configuration will remain unchanged for all ramps, however each ramp will require alignment modifications to meet the DDI geometric lane configuration. The terminal gore point locations on I-95 will remain unchanged. The existing I-95 bridge over Northlake Boulevard will require replacement with a longer bridge structure to span over the DDI geometric configuration. I-95 will continue to traverse over Northlake Boulevard. The DDI lane geometrics along Northlake Boulevard will pass under the new I-95 bridge structure. The DDI geometrics will meet the requirements for a high speed urban highway with a 40 mph design speed and a crossover intersection angle of 40 degrees to meet FHWA DDI guidelines and FDOT District 4 requirements.

This concept will also widen WB Northlake Boulevard from three to four lanes between Military Boulevard and Sandtree Drive/Sunrise Drive. In addition, EB Northlake Boulevard will be widened from three to four lanes beginning west of Keating Drive to Sandtree Drive/Sunrise Drive. **Appendix B** depicts the conceptual layout for Build Alternative 2.

2.5.4 Build Alternative 3E – Dual Flyover Ramps

This concept will modify the existing I-95 tight diamond interchange at Northlake Boulevard to provide two flyover ramps. One flyover ramp will allow direct connection from EB Northlake Boulevard to NB I-95. The other flyover ramp will allow a direct connection from WB Northlake Boulevard to SB I-95. Each ramp will be a single lane ramp. The terminal gore point locations on I-95 will move for Ramp A and Ramp C. The existing I-95 bridge over Northlake Boulevard will remain unchanged.

Beginning approximately 1,500-ft west of I-95, the EB to NB ramp will vertically take-off within the Northlake Boulevard median at a 5% grade to span over and maintain the signalized intersection at Keating Drive. The EB to NB ramp will span over I-95 and vertically transition down to meet the existing at-grade NB on-ramp (Ramp C) and I-95 general purpose lanes approximately 1,200-ft north of Northlake Boulevard. The existing at-grade NB on-ramp will merge with the EB to NB flyover ramp into a single lane ramp. This single lane ramp will be separated from the I-95 general purpose lanes by a concrete barrier wall until a point at which the ramp will begin to merge into NB I-95. The single lane ramp will merge with NB I-95 approximately 4,500-ft north of Northlake Boulevard.

Beginning approximately 1,200-ft east of I-95, near the Sandtree Drive signalized intersection, the WB to SB ramp will vertically take-off within the Northlake Boulevard median at a 5% grade to span over I-95. The flyover will vertically transition down to meet the existing at-grade SB on-ramp (Ramp A) and I-95 general purpose lanes approximately 1,200-ft south of Northlake Boulevard. The existing SB on-ramp will merge with the WB to SB flyover ramp into a single lane ramp. This single lane ramp will be separated from the I-95 general purpose lanes by a concrete barrier wall until a point at which the ramp will begin to merge with SB I-95. The single lane ramp will merge with SB I-95 approximately 4,500-ft south of Northlake Boulevard.

Each flyover ramp has a design speed of 35 mph with the following typical section characteristics:

- 580-ft radius
- One 15-ft travel lane
- 10-ft inside shoulder (provided for stopping sight distance)
- 6-ft outside shoulder

This concept will also widen WB Northlake Boulevard from three to four lanes between Military Boulevard and Sandtree Drive/Sunrise Drive. In addition, EB Northlake Boulevard will be widened from three to four lanes beginning west of Keating Drive to Sandtree Drive/Sunrise Drive. **Appendix B** depicts the conceptual layout for Build Alternative 3E.

2.6 Purpose of the ESBA Evaluation

The purpose of this document is to present the findings of the ESBA assessment completed for the proposed corridor. The objective of this document is to present the findings of the protected species involvement and other wildlife that may be affected by the proposed improvements to I-95 at Northlake Boulevard Interchange. This evaluation was conducted in accordance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and Part 2, Chapter 27 of the PD&E Manual (August 2016). The following information is provided to determine the anticipated effects that the proposed improvements will have on federal and state endangered or threatened species. State designated species of special concern were also considered. In addition to the No-Build Alternative, three build alternatives were evaluated for impact potential by this PD&E Study.

Section 3

Existing Natural and Environmental Conditions

3.1 Existing and Future Land Use

The interchange falls within the City of Palm Beach Gardens and Unincorporated Palm Beach County. According to the Palm Beach County and City of Palm Beach Gardens Zoning District Maps, the area northeast of the project is zoned residential low density (RL2, RL3), mixed use (MXD), general commercial (CG1), and public or institutional (P/I); southeast is zoned general commercial (CG1), residential medium density (RM), professional office (PO), and industrial. The area northwest of the project is zoned residential low density (RL3), general commercial (CG1), and intensive commercial (CG2). The area southwest of the interchange is zoned general commercial (CG), residential medium density (RM), and residential low density (RL3). The commercial retail/office uses are located along Northlake Boulevard (north and south) both east and west of I-95. Residential uses within the area are primarily buffered by the commercial uses along Northlake Boulevard; however, they are adjacent to I-95 further north and south of the interchange. A mix of commercial retail/office and residential activities exist southeast of the interchange as part of the Northlake Boulevard Planned Unit Development.

According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project is expected to support the vision of both Palm Beach County and the City of Palm Beach Gardens as it will accommodate the expanding employment growth in the area supported by the established Planned Unit Development (Northlake Boulevard), City of Palm Beach Gardens Northlake Boulevard Overlay Zone, and growing commercial retail/office uses around the interchange. Effects on the area's character resulting from the minor additional right-of-way required as part of the interchange improvement are anticipated to be minimal. **Figure 3-1** shows the existing land use in the surrounding area of the project study limits.

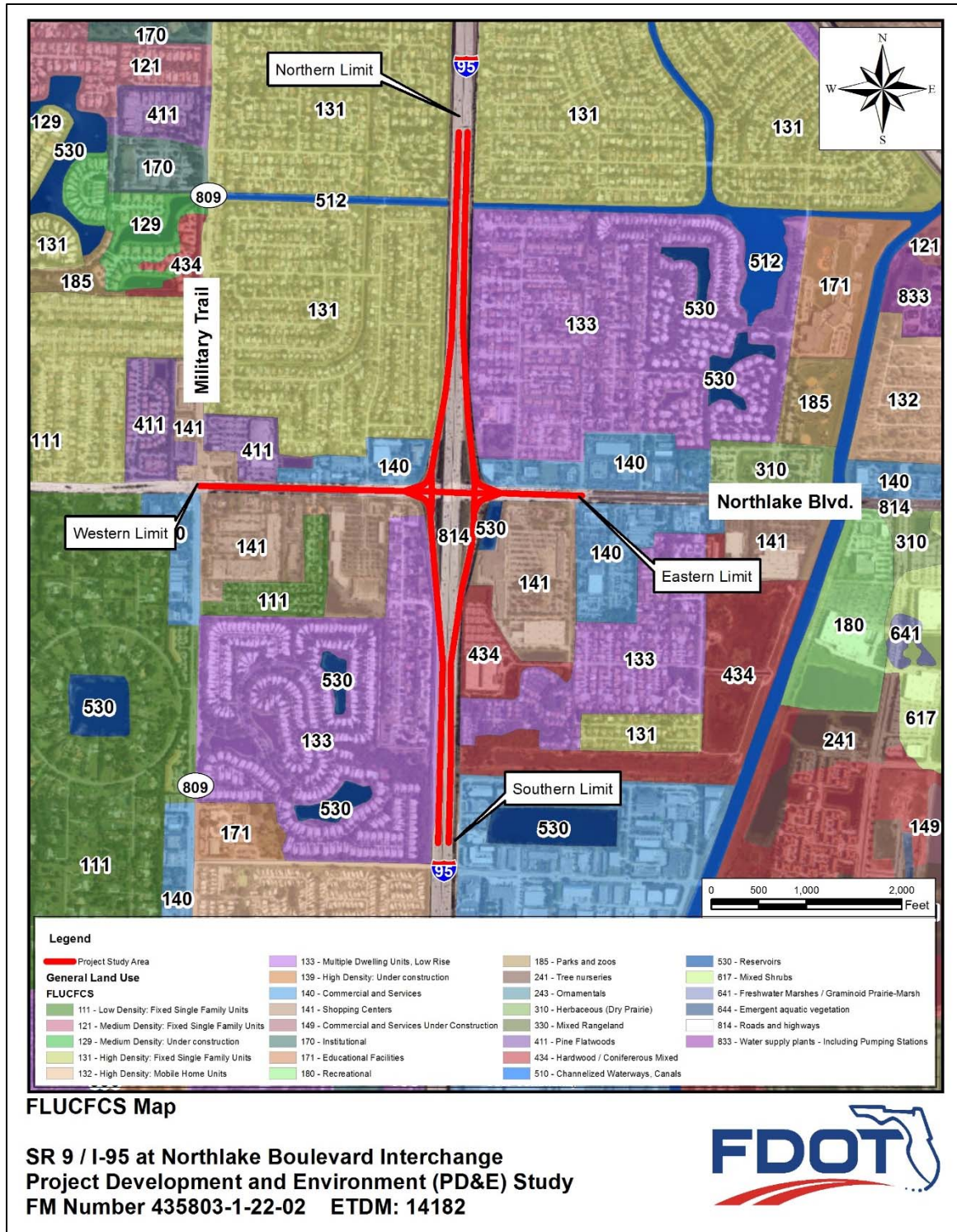


Figure 3-1 Existing Land Use Map

3.2 Soils

United States Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) Web Soil Survey tool was used to map the soils within the study area. Within the Palm Beach County component of the study area, four different soil types were identified by the USDA NRCS Web Soil Survey. The USDA NRCS Web Soil Survey Map created for the study area is available in **Appendix C**. Below, **Table 3-1** summarizes the soils that were identified and some of these soil types appear on the USDA NRCS Hydric Soils List (2015 version).

Table 3-1 Soils Mapped by NRCS in the Project Area

SOIL NAME	MAP UNIT NUMBER (#)	HYDRIC CLASSIFICATION	PERCENT (%) OF PROJECT AREA
Palm Beach County, FL			
Basinger Fine Sand	6	Yes*	5.5
Arents- Urban Land Complex	4	No	15.8
Immokalee Fine Sand	18	Yes*	69.9
Myakka- Urban Land Complex	22	Yes*	8.8

*Appears on the USDA NRCS National List of Hydric Soils (2015 version).
Source: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>

3.3 Wetland and Surface Water Features

Wetlands were identified and delineated based on the criteria specified in the US Army Corps of Engineers (USACE) Federal Manual for Identifying and Delineating Jurisdictional Wetlands (USACE, 1987) and the Atlantic and Gulf Coast Regional Supplement (2010, version 2.0). Additionally, the Florida Department of Environmental Protection (FDEP) Florida Wetlands Delineation Manual (FDEP, 2011) with the aid of the US Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI) maps and USDA NRCS National Hydric Soils List, Natural Resources Conservation Service's (NRCS) soil survey, aerial photographs, the FDOT's ETDM-EST and Screening Summary Report for 14182 (see **Appendix A**), along with field observations.

A desktop review was performed prior to field assessments, based on known soils, aerial images, and current NWI/USFWS maps that are visible as a data layer in Google Earth imagery. A field review was conducted on January 17, 2017. The review occurred during daylight hours between 8:30 am and 5:00 pm. Based on these reviews, no wetlands were identified within the Study Area.

It was determined by the desktop review and site visits that no jurisdictional wetlands occur within the study limits, adjacent to the study limits or within the FDOT right-of-way.

3.4 Other Surface Water Features

For the study area, this classification includes one stormwater treatment pond located outside of the existing FDOT right-of-way. The FLUCFCS code of 530 for reservoirs was assigned to this other surface water. There is also one man-made surface water canal, Earman River Canal, which connects to the SFWMD C-17 Canal. Details are described below and the location within the study area. The FLUCFCS code of 510 for streams and waterways was assigned to this other surface water.

Northlake Commons is located at the southeast corner of I-95 and Northlake Boulevard. This shopping plaza includes a 1.2 acre wet detention pond located adjacent to the I-95/Northlake Boulevard right-of-way line. The pond has planted cypress trees around the perimeter of the pond. It is classified as wet detention under SFWMD permit 50-01482-S and was discussed as part of the Interagency Meeting on January 19, 2017. Photographs are available in **Appendix E** and the Interagency Meeting Notes are in **Appendix D**. This other surface water feature is identified as OSW-1 in the exhibits included in **Appendix D**.

The Earman River Canal in northeastern Palm Beach County flows northeast from Clear Lake in West Palm Beach to a flood control structure near US 1 in Palm Beach Gardens. The Earman River canal converges with the C-17 Canal which eventually leads to the Intracoastal Waterway. It runs through the cities of Riviera Beach and Palm Beach Gardens and is a man-made surface water canal. It is located on the east and west sides of I-95 between Stations 150 and 155 and is connected by a box culvert underneath I-95. During a field visit on January 17, 2017, no protected resources were observed within the drainage canal. The canal banks are maintained and steeply sloped, lacking the hydrophytic vegetation that are needed to qualify as a jurisdictional wetland. Photographs and field notes are available in **Appendix E**. This other surface water feature was discussed as part of the Interagency Meeting on January 19, 2017 and is identified as OSW-2 in the exhibits included in **Appendix D**.

3.5 Potential Impacts to Other Surface Waters

Table 3-2 summarizes the potential impacts to other surface waters per alternative. Alternative 2, the DDI, is the only alternative that has a small amount of impact to OSW-1, the Northlake Commons pond. All three alternatives have minor impacts to OSW-2, the Earman River Canal, but are also minor and should not require mitigation regardless of the selected alternative.

Table 3-2 Summary of Potential Impacts to Other Surface Waters per Alternative

Other Surface Waters Potential Impacts	Alternative 1 (acres)	Alternative 2 (acres)	Alternative 3 (acres)	No Build (acres)
OSW-1	None	0.066	None	None
OSW-2	0.132	0.074	0.074	None
Total Acres	0.132	0.140	0.074	0.000

Section 4

Assessment Methodology

4.1 Data Collection

In accordance with Part 2, Chapter 27 of the FDOT PD&E Manual (August 2016), the project study area was evaluated for the potential occurrence of federal and state-listed protected plant and animal species. Literature reviews (see References), agency database searches (listed below in References), agency coordination, and field reviews were conducted to identify protected species and critical habitat that might occur within the study area.

Information sources and databases utilized for the present wildlife analysis, many of which provided information specific to Palm Beach County, include the following:

- FDOT ETDM Programming Screen Summary Report (Project # 14182),
- USFWS Information for Planning and Conservation (IPaC),
- USFWS Florida Wood Stork Colonies Core Foraging Areas (map), and
- Florida Natural Areas Inventory (FNAI) Tracking List (plants and animals).

4.2 Field Survey Methodology

Biologists conducted a field review on January 17, 2017, see **Appendix E** for field notes and the photograph log. The review occurred during daylight hours and weather conditions were sunny to partly cloudy. The field review assessed the occurrence or potential occurrence of listed wildlife and plant species within the project area. The surveys took place within the project corridor's ROW and consisted of a walking survey through areas with potential to support listed plant and/or wildlife species or indicators of their presence. Vehicular surveys and roadside observations were also conducted. Observations of animal and plant species identified during field assessments were documented in the field notes. No listed plant species were observed during the field reviews.

The agency ETDM comments listed one potentially occurring federally-listed species that could occur within the project area: the wood stork. No wildlife observations occurred during the field review there were no sightings of the wood stork.

According to the USFWS Recovery Plan for wood storks, nesting occurs in Florida from October to June. Therefore, a field review was conducted within this nesting period on January 17, 2017. No wood storks were observed within the project area, no nesting or roosting activity was observed.

Based on a field review to the Lake Park Scrub Palm Beach County Natural Area on January 17, 2017 and review of species occurrence potential for the project area, no scrub jays were observed and no suitable habitat exists in the project limits or near the study area. This natural area is located approximately 1.2 miles east of the project area in a residential, industrial and commercial area.

Table 4-1 below includes the listed species having the potential to occur in the project area, based on potential availability of suitable habitat, known ranges, and input received from ETDM commenting agencies. Note that this species list does not preclude the existence of other wildlife (listed or not listed) from inhabiting or migrating through the project area. This table denotes the species name, common name, Federal and State listing status, and the likelihood of occurrence (low, moderate, or high rating) in the project area.

Table 4-1 Federal and State Listed Species Potentially Occurring in the Project Area

Common Name	Scientific Name	Federal Status **	State Status ***	Occurrence Potential
MAMMALS				
West Indian manatee	<i>Trichechus manatus</i>	E	FE	Low
BIRDS				
Wood stork	<i>Mycteria americana</i>	E	FE	Moderate
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	T	FT	Low
Least tern	<i>Sterna antillarum</i>	E	ST	Low
Black skimmer	<i>Rynchops niger</i>	N/L	SSC	Low
REPTILES				
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	FT	Low

**Federal Status: E = Endangered; T = Threatened; T (S/A) = Threatened due to Similarity of Appearance;
 ***State Status: FE = Federally Endangered; FT = Federally Threatened; FT (S/A) = Federally Threatened due to Similarity of Appearance; ST = State Threatened; NL = Not Listed; SSC = Species of Special Concern
 Sources: USFWS, FWC, FDOT, ETDM-EST

As indicated in **Table 4-1**, species with a low rating are defined as those species whose preferred habitat is limited or lacking within the project limits, and which have not been observed in the project area; species with a moderate rating are defined as those species with some preferred habitat

- 1 within the project limits, but which have not been observed in the project area; and species with
2 a high rating are defined as those species with preferred habitat existing within the project limits,
3 and have been observed or reported within the project area. Each of these listed species is
4 described in Section 5.0.
- 5 The USFWS only identified the wood stork as having a minimal potential to occur in the project
6 area. The ETDM review comments provided by the USFWS are summarized in Section 7.0
7 Agency Coordination.

Section 5

Listed Species Descriptions and Survey Results

Life history information for each of the potentially occurring species listed in **Table 4-1** is described in the following sections. The specific population size for each species within the exact project area is unknown. Much of this information was excerpted from FNAI tracking lists and USFWS species profiles.

5.1 Mammals

5.1.1 West Indian Manatee (*Trichechus manatus*) [Status: E (U.S. FWS); FE (FWC)]

Manatees are large aquatic mammals, typically grey in color, with paired flippers and a round, paddle-shaped tail. Adults are usually around 9 feet in length and weigh about 1,000 pounds. They are herbivorous, feeding on a wide variety of floating, emergent and submerged vegetation. Manatees are slow swimming, usually at depths of 3-6 feet, and they have no natural predators.

Manatees range freely between marine and freshwater regions residing in coastal waters, bays, rivers, and canals. They have little tolerance for cold weather and tend to inhabit warm water areas especially in winter, congregating in large numbers in springs and in warm water discharge areas of coastal power plants. In the spring, manatees leave warm water sites, often traveling great distances during the summer, returning to warm water sites in the fall. In Florida, they migrate seasonally during winter months to the Intracoastal Waterway and connecting waterways, residing there from November to March.

Various human activities leave manatees extirpated from many areas, causing patchy distribution. Manatee declines and threats stem from anthropogenic factors including: collisions with watercraft and boat propellers, poaching, and loss of suitable habitat through coastal development, especially the destruction of seagrass beds by boating facilities.

1 No designated critical habitat for the manatee occurs in the project area, and no manatees were
2 observed in the Earman River Canal during field reviews. Standard Measures for Manatee
3 Protection for In Water Work (see **Appendix F**), if necessary, will be addressed during the
4 design phase of the project when environmental resource permitting will occur that would
5 include coordination with USFWS if needed.

6 **5.2 Birds**

7 **5.2.1 Wood Stork (*Mycteria americana*) [Status: E (USFWS); FE (FWC)]**

8 Wood storks are large, wading birds, about 50 inches tall, with a wingspan of 60-65 inches.
9 Their plumage is white, except for black primary/secondary feathers and a short black tail.
10 Wood storks occur in freshwater, brackish and estuarine wetlands with nesting, roosting and
11 foraging occurring in a variety of inundated forested wetlands such as swamps and mangroves.
12 This colonial species is found nesting in large rookeries and feeding in flocks. South Florida
13 wood storks lay eggs as early as October and fledge in February or March. Because of their
14 specialized feeding behavior, wood storks forage most effectively in shallow-water areas with
15 highly concentrated prey, feeding almost exclusively on small fish (1-10 inches).

16 The southeast U.S. breeding population has declined because of suitable feeding habitat loss
17 and water source manipulation. These alterations lead to a reduction in the food base necessary
18 to support breeding colonies. As a result, wood storks are increasingly foraging in artificial
19 habitats (e.g., drainage swales along highways/roadways).

20 Research and desktop analysis using USFWS Wood Stork Florida Nesting Colonies Maps
21 (03/24/2016 version) found that the project corridor lies within the CFA's (18.6-mile radius)
22 of two active wood stork nesting colonies illustrated in **Figure 5-1**. The Ballen Isles (Nest ID
23 81) in Palm Beach County, FL was documented as last active in 2015 (Latitude 26.830,
24 Longitude -80.109). The Solid Waste Authority (Nest ID 83) in Palm Beach County, FL was
25 also documented as last active in 2015 (Latitude 26.769, Longitude -80.146). The nesting
26 colony locations are located approximately one mile and 3.6 miles, respectively, from the
27 project area.

28 No suitable nesting or foraging habitat exists within the project area and wood storks were not
29 observed in the project vicinity during field reviews conducted on January 17, 2017. Impacts
30 to the wood stork CFA is typically assessed by the USFWS relative to the amount and types of
31 wetland impacts that occur as a result of the proposed project. The other surface water impacts
32 are minimal and do not support or function as suitable foraging habitat for the wood stork. On-
33 going coordination with USFWS will determine the "effect" the proposed action will have on
34 the federally endangered wood stork.

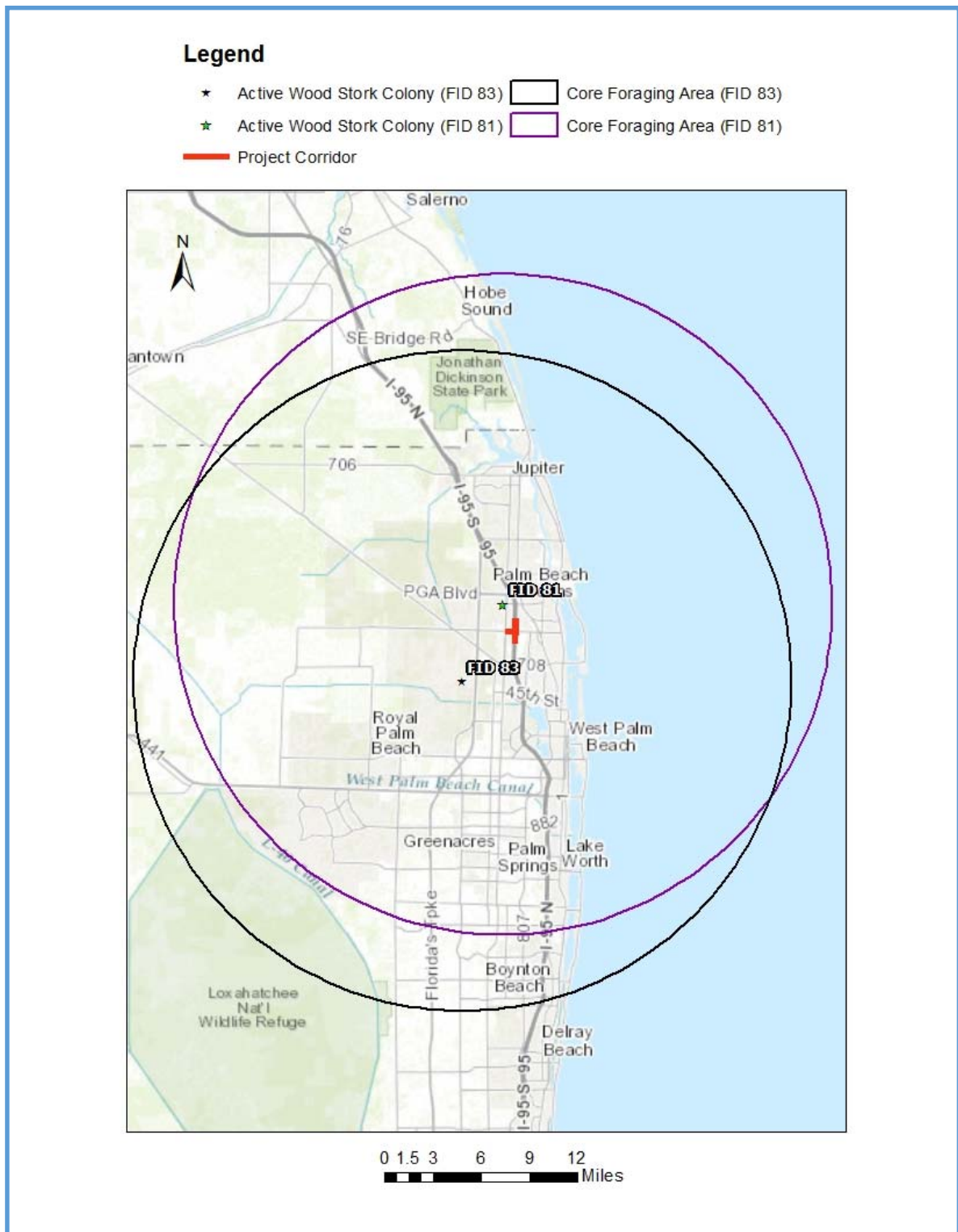


Figure 5-1 Wood stork CFA's overlapping I-95 at Northlake Boulevard Interchange PD&E project area

1 5.2.2 Florida Scrub-Jay (*Aphelocoma coerulescens*) [Status: T (USFWS); FT (FWC)]

2 The Florida scrub-jay is a blue and gray bird that reaches lengths of 12 inches with a wing span
3 of 13.5 inches. A blue-colored necklace surrounds their neck, separating their whiter throat
4 from their grayish breast. Florida scrub-jays also have a gray back and underparts, along with
5 a blue head, tail, and wings. The diet of the Florida scrub-jay primarily consists of insects,
6 frogs, toads, lizards, mice, bird eggs, and acorns.

7 Florida scrub-jays live in family groups that consist of a breeding pair and their
8 offspring. Scrub-jays begin breeding around the age of two to three years of age, and will
9 continue breeding throughout their lifetime. Scrub-jays are cooperative breeders, as the young
10 will stay with their parents for one or more years to help raise other young and defend the
11 territory. Scrub-jays have a short breeding season as eggs and juveniles are typically found in
12 nests from March through June. Nests are developed from twigs and palmetto fibers and are
13 built three to ten feet off of the ground in shrubby oaks. Scrub-jays typically use the same nest
14 each year. Florida scrub-jays usually have one brood (the young hatched from a single clutch)
15 per year. Non breeding scrub-jays will stay with their families for a year or two before they
16 separate and develop their own territory.

17 The Florida scrub-jay is the only species of bird that is unique to Florida. Scrub-jays inhabit
18 sand pine and xeric oak scrub, and scrubby flatwoods, which occur in some of the highest and
19 driest areas of Florida – ancient sandy ridges that run down the middle of the state, old sand
20 dunes along the coasts, and sandy deposits along rivers in the interior of the state. Scrub-jays
21 do best in areas that contain large quantities of oak shrubs that average 3.28-6.56 feet (one to
22 two meters) (C. Faulhaber pers comm. 2011).

23 This species was not observed during field reviews, and no appropriate nesting or foraging
24 habitat for this species occurs in the project area. On-going coordination with USFWS will
25 determine the “effect” the proposed action will have on the federally threatened Florida scrub-
26 jay.

27 5.2.3 Least Tern (*Sternula antillarum*) [Status E (USFWS); T (FWC)]

28 The least tern is the smallest tern in North America. Least terns can reach a length between
29 8.3-9.1 inches with a wingspan of 21-23 inches. Least terns have long pointed wings and a
30 deeply forked tail. Other physical characteristics include a yellow beak, gray back, white belly,
31 and black cap. The least tern’s diet primarily consists of fish, but they will also feed on small
32 invertebrates.

33 Male least terns have a unique courtship ritual. During courting, the male will offer the female
34 food in hopes of gaining her choice as a mate. Once the two mates are together they will begin
35 building the nest in shallow depressions in bare beach sand. Least terns will also build nests
36 on gravel rooftops. Least terns lay eggs between the middle of April and the beginning of
37 May. The eggs are camouflaged to help prevent predation. Egg incubation lasts for 21
38 days. Young least terns are able to leave the nest three to four days after hatching.

39 The least tern inhabits areas along the coasts of Florida including estuaries and bays, as well as
40 areas around rivers in the Great Plains. In Florida, the least tern can be found throughout most

1 coastal areas. Outside of Florida, least terns are found along the U.S. Atlantic Coast, mid-
2 Atlantic states, and down from Mexico to northern Argentina.

3 According to the ETDM Summary report, one least tern was documented in the southeast
4 quadrant of the interchange in 2000. This species was not observed during field reviews, and
5 no appropriate nesting or suitable foraging habitat for this species occurs in the project area.
6 On-going ordination with USFWS will determine the “effect” the proposed action will have on
7 the federally endangered least tern.

8 **5.2.4 Black skimmer (*Rynchops niger*) [Status N/L (USFWS); SSC (FWC)]**

9 The black skimmer is a seabird with defining physical characteristics that make it easily
10 distinguishable from others. The key physical feature of the skimmer is its large red and black
11 bill. The bill begins to widen at the top and gradually becomes smaller as it forms a sharp tip
12 at the end of the bill. The lower part of the bill is longer than the top, which is important
13 because they use their bill to skim along the top of the water to catch fish, for which they are
14 aptly named. Skimmers can reach a height of 19.7 inches with a wingspan of 3 to 3.5
15 feet. Skimmers have a black back, black wings with white edging, and a white belly and head.

16 The diet of the black skimmer primarily consists of fish. The skimmer has a unique style of
17 feeding that involves literally “skimming” the surface of the water with their lower bill. When
18 they contact a prey item, they quickly bend their head forward and snap the upper bill closed,
19 seizing their prey.

20 Breeding occurs during the summer, generally between May and early September. Skimmers
21 nest on the sand along beaches, sandbars, and islands developed by dredged-up
22 material. Nesting occurs in colonies consisting of one to several hundred pairs of
23 skimmers. Skimmers usually lay three to five eggs per nest and eggs are incubated by both
24 parents for approximately 23-25 days. Once hatched, parents guard the offspring until they are
25 able to fly at about 28-30 days old.

26 The black skimmer inhabits coastal areas in Florida such as estuaries, beaches, and
27 sandbars. Skimmers can be found from the coasts of the northeastern U.S., down to Mexico,
28 and over to the Gulf Coast of Florida. Breeding range is from Southern California, down to
29 Ecuador.

30 According to the ETDM Summary report, one black skimmer was documented in the southeast
31 quadrant of the interchange in 2000. This species was not observed during field reviews, and no
32 appropriate nesting or foraging habitat for this species occurs in the project area. On-going
33 coordination with USFWS will determine the “effect” the proposed action will have on the
34 species of special concern black skimmer.

35 **5.3 Reptiles**

36 **5.3.1 Eastern indigo snake (*Drymarchon corais couperi*) [Status: T (USFWS); FT (FWC)]**

37 The eastern indigo snake is bluish black above and uniformly dark blue below. It is one of
38 the largest North American snakes, with most adults averaging 5-7 feet in length. This snake is
39 common throughout Florida in all terrestrial habitats and hydric hammocks which have not

1 suffered high-density urban development (as it requires large areas of undeveloped lands).
2 It prefers upland habitats, but occurs in both forested uplands and wetlands (e.g., mangrove
3 swamps), as well as urban and human-altered habitats (e.g., agricultural lands).

4 Eastern indigo snake presence is associated with gopher tortoise occurrences, as the burrows
5 provide shelter for the snakes during the winter. In south Florida, the Eastern indigo snake
6 is thought to be more widely distributed than in other parts of its range. Population decline of
7 the Eastern indigo snake is attributed to habitat loss and destruction, and highway mortality
8 to some degree. Eastern indigo snakes are restricted to Florida and southern areas of Georgia,
9 Alabama, and Mississippi. According to the USFWS, the wide distribution and large
10 territory size of the Eastern indigo snake complicate evaluation of its population status
11 and trends; making it difficult to estimate population viability of this species. In addition,
12 there is not enough quantitative data with which to evaluate the trend of Eastern indigo
13 snakes in South Florida.

14 This species was not observed during field reviews, and no suitable habitat exists within the
15 highly developed and commercialized project area. On-going coordination with USFWS will
16 determine the “effect” the proposed action will have on the federally threatened Eastern indigo
17 snake.

18 **5.4 Other Considerations**

19 During field reviews and project surveys, no designated critical habitats for any of the listed species
20 were found to occur in the project area. Similarly, no protected species were observed in the Earman
21 River Canal during field reviews.

Section 6

Effects Analysis and Results

Potential impacts to the protected species described in Section 5.0 were evaluated. The results of the ESBA indicate that no effect or adverse impacts to any of these protected species are anticipated as a result of the proposed project.

6.1 West Indian Manatee

Some in-water construction activity may be associated with the box culvert extension for the Earman River Canal. Protection measures consisting of the FWC's *Standard Manatee Conditions for In-Water Work* in **Appendix F** will be incorporated and adhered to during construction if in-water work is required. FDOT determined the project will have "*no effect*" to the West Indian manatee.

6.2 Wood Stork

No suitable nesting or foraging habitat exists within the project area and wood storks were not observed in the project vicinity during field reviews conducted on January 17, 2017. Impacts to the wood stork CFA is typically assessed by the USFWS relative to the amount and types of wetland impacts that occur as a result of the proposed project. There are no wetland impacts anticipated by the proposed project improvements, regardless of the selected alternative. Only minor impacts to other surface waters have been identified and these areas do not provide suitable foraging habitat for the wood stork. On-going coordination with USFWS will determine the "effect" the proposed action will have on the federally endangered wood stork.

Due to the distances of the active nesting colonies to the project area, the lack of impacted natural resources, such as wetlands, and the guidance provided by the USFWS Wood Stork Effect Determination Key, a determination of "*no effect*" was made for the federally endangered wood stork.

6.3 Florida Scrub-Jay

The Florida scrub-jay was not observed within the project area and there is limited potential for the scrub-jay to migrate to any parts of the project area due to the project's highly commercialized nature. Habitat that supports the scrub-jay is very specific and consists of sand pine scrub, shrubby oaks, open patches of sand and few trees. Due to the urban setting of the project, there is general lack of suitable habitat for the scrub-jay, therefore, "no effect" is anticipated for the Florida scrub-jay.

6.4 Least Tern

In 2000, one least tern was observed in the southeast quadrant of the interchange; however, no suitable habitat exists within the project area. The least tern diet consists of small fish and invertebrates and because there is no in-water work the least tern diet will not be affected. Additionally, least terns typically inhabit the coasts of Florida in estuaries and bays. The project area does not support least tern habitat. It is anticipated the project will have "no effect" to the least tern.

6.5 Black Skimmer

In 2000, one black skimmer was observed in the southeast quadrant of the interchange; however, no suitable habitat exists within the project area. The black skimmer diet consists primarily of fish and because there is no in-water work proposed, the black skimmer diet will not be affected. Additionally, black skimmers inhabit coastal areas, estuaries, beaches and sandbars which are not located within the project area. It is anticipated that the project will have "no effect" to the black skimmer.

6.6 Eastern Indigo Snake

Slight xeric habitat was observed within the right-of-way during the field reviews and no gopher tortoise burrows were observed in these areas. Due to the urban setting of the project area, there is a general lack of suitable habitat for this species. The FDOT will incorporate the USFWS's *Standard Protection Measures for the Eastern Indigo Snake* in the contract documents to alert the Contractor to the potential presence of this snake. Based on the USFWS Eastern Indigo Snake Programmatic Effect Determination Key, lack of suitable habitat and incorporation of the standard protection measures, it is anticipated that the project will have "no effect" to the Eastern indigo snake.

Section 7

Agency Coordination

Agency coordination has occurred to discuss potential impacts to protected species and wetlands, and to obtain species and habitat-related information. Agency coordination will continue throughout the PD&E Study, final design and permitting phases. The Advance Notification (AN) package was transmitted to the Environmental Technical Agency Team (ETAT) reviewers via the ETDM Environmental Screening Tool (EST) and coordination with environmental review agencies has occurred through the FDOT ETDM process.

An Interagency review meeting was held January 19, 2017 at the SFWMD headquarters (meeting minutes are included in **Appendix D**). Attendees included representatives from FDOT District Four, SFWMD, and engineering/environmental consultant staff. The USACE was unable to attend this meeting. A WER was also prepared, to address the ETDM ETAT agencies' concerns regarding the project's potential impacts to wetlands which would serve as habitat and/or foraging areas for certain species.

The ETDM review process with the ETAT agencies occurred from March 2012 through April 2012. The ETDM Programming Screen Summary Report dated May 27, 2015 is located in **Appendix A**. ETAT agency comments related to wildlife and habitat and listed species were received from the USFWS, the NMFS, the SFWMD and the FWC. In addition, the NMFS included a comment under Coastal and Marine category. The ETAT comments from USFWS, FWC and SFWMD are presented below.

7.1 USFWS – John Wrublik for Wildlife and Habitat Project Effects

Degree of Effect: *2 Minimal assigned 07/29/2014 by John Wrublik, US Fish and Wildlife Service*

Coordination Document: *To Be Determined: Further Coordination Required*

Direct Effects Identified Resources and Level of Importance: *Federally listed species and fish and wildlife resources.*

Comments on Effects to Resources:

Federally-listed species -

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources.

Wood Stork

*The project corridor is located in the Core Foraging Areas (CFA), within 18.6 miles of an active nesting colony of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced.*

Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

Fish and Wildlife Resources

Wetlands provide important habitat for fish and wildlife. Data in the environmental screening tool indicate that wetlands may occur within the project area. We recommend that the project be designed to avoid and minimize impacts to wetland resources to the greatest extent practicable. If impacts to wetlands are unavoidable, we recommend that the FDOT provides mitigation that fully compensates for the loss of wetland resources.

7.2 Florida Fish and Wildlife Conservation Commission for Wildlife and Habitat Project Effects

Degree of Effect: *2 Minimal assigned 08/14/2014 by Scott Sanders, FL Fish and Wildlife Conservation Commission*

Coordination Document: *No Involvement*

Direct Effects Identified Resources and Level of Importance: *No significant fish or wildlife resources were identified in the project area.*

Comments on Effects to Resources: *Minimal impacts to fish or wildlife are anticipated to result from this project.*

Recommended Avoidance, Minimization, and Mitigation Opportunities: *None identified.*

7.3 FDOT District 4 Coordinator Summary for Wildlife and Habitat Project Effects

Coordinator Summary Degree of Effect: *2 Minimal assigned 11/21/2014 by FDOT District 4*

Comments:

The interchange is within the South Florida Ecosystem Management Area, the FWS Consultation Area for the Florida scrub-jay, and the Core Foraging Area of one active nesting Wood Stork colony. While one least tern and one black skimmer were documented in the southeast quadrant of the interchange in the year 2000, no habitat for either species is present in the project area. Given the limited number of wildlife and habitat resources present and the urban nature of the area, a Summary DOE of Minimal has been assigned to the Wildlife and Habitat issue.

The final design of the project will avoid and/or minimize impacts to wetlands/wildlife and habitat to the greatest extent practicable (including confining new DRAs to previously disturbed sites), and best management practices will be utilized during project design and construction; appropriate mitigation will also be provided for unavoidable impacts. During Project Development, an Endangered Species Biological Assessment will be prepared in compliance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq) and in accordance with Part 2, Chapter 27 of the FDOT PD&E Manual. USFWS indicated that a functional assessment using the USFWS's Wood Stork Foraging Analysis Methodology is required on the foraging habitat to be impacted and the foraging habitat provided as mitigation for projects that impact 5 or more acres of wood stork foraging habitat.

7.4 SFWMD – Mindy Parrott for Coastal and Marine

Degree of Effect: *0 None assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District*

Coordination Document: *Permit Required*

7.5 NMFS – Brandon Howard for Coastal and Marine

Degree of Effect: *0 None assigned 11/21/2014 by Brandon Howard, National Marine Fisheries Service*

Coordination Document: *No Involvement*

Direct Effects Identified Resources and Level of Importance: *None.*

Comments on Effects to Resources: *None.*

Additional Comments (optional):

1 *Magnuson-Stevens Act: FDOT proposes to widen the road by adding one lane in each direction.*
2 *There are several canals within the project corridor. However, the project is located upstream of*
3 *SFWMD water control structures. Based on the project location, information provided in the*
4 *ETDM website, and GIS-based analysis of impacts, NMFS has no comments or recommendations*
5 *to provide pursuant to the EFH requirements of the Magnuson-Stevens Fishery Conservation and*
6 *Management Act (P.L. 104-297); and this project will not require an EFH Assessment. Further*
7 *consultation on this matter is not necessary unless future modifications are proposed and you*
8 *believe that the proposed action may result in adverse impacts to EFH.*

9 *Endangered Species Act: We are not aware of any threatened or endangered species or critical*
10 *habitat under the purview of NMFS that occur within the project area. However, it should be noted*
11 *that a "no effect" determination must be made by the action agency and the reasoning underlying*
12 *the determination should be documented in a project file. Please coordinate closely with the U.S.*
13 *Fish and Wildlife Service for other species listed under the Endangered Species Act that may*
14 *require consultation.*

15 *Fish and Wildlife Coordination Act: Based on the project location, information provided in the*
16 *ETDM website, and GIS-based analysis of impacts, NOAA's National Marine Fisheries Service*
17 *(NMFS) concludes the proposed work would not directly impact wetlands areas that support NOAA*
18 *trust fishery resources. NMFS has no comments or recommendations to provide pursuant to the*
19 *Fish and Wildlife Coordination Act.*

20 **7.6 FDOT District 4 Coordinator Summary for Coastal and Marine**

21 **Coordinator Summary Degree of Effect:** 0 None assigned 11/21/2014 by FDOT District 4

22 **Comments:** *As the project is located approximately three miles west of the Atlantic Ocean and*
23 *Intracoastal Waterway, it is not within an area considered to have coastal or marine resources.*
24 *The NMFS indicated that the proposed work would not directly impact areas that support essential*
25 *fish habitat (EFH), NOAA trust fishery resources, or wetland areas that support NOAA trust fishery*
26 *resources. As such, this project will not require an Essential Fish Habitat Assessment, nor is further*
27 *consultation with the NMFS necessary unless future modifications to the project could result in*
28 *adverse impacts to EFH. For these reasons, a Summary DOE of None has been assigned to the*
29 *Coastal and Marine issue.*

Section 8

Conclusions and Commitments

Protected species (see Section 5.0) identified by the USFWS and/or FWC that are known to occur or have the potential to occur in the project area were evaluated. Based on the background research and field and desktop reviews, no adverse effects to any of these species are anticipated to occur regardless of the selected alternative. This is primarily due to lack of natural resources, species occurrence and suitable habitat in the project area. It is anticipated that the USFWS will concur with the following determinations being proposed in this ESBA by the FDOT on behalf of FHWA:

- Manatee: *no effect*
- Wood stork: *no effect*
- Florida scrub-jay: *no effect*
- Least tern: *no effect*
- Black skimmer: *no effect*
- Eastern indigo snake: *no effect*

Additionally, it was determined by the desktop review and site visits that no jurisdictional wetlands occur with the study limits, adjacent to the study limits or within the FDOT right-of-way. Therefore, no impacts to wetlands will occur as part of the proposed improvements, regardless of the selected alternative. Only very minor impacts to other surface waters are anticipated. Therefore, mitigation should not be required. Minimal indirect effects from construction and no cumulative effects are anticipated by the proposed improvements and mitigation of minor impacts to other surface waters should not be required.

The FDOT will continue to coordinate with the appropriate regulatory agencies (USFWS, FWC) as required throughout the design/permitting and construction phases of the project. During this time, a wildlife survey will be conducted to determine if any federally-listed or state-listed species

are routinely using the areas proposed for construction. Additional monitoring and protection measures will be incorporated into the construction project if deemed necessary.

In order to ensure that adverse impacts to listed (protected) species within the vicinity of the project will not occur, the FDOT will abide by the following commitments:

- If the project design is modified such that in-water work is proposed (for the tributary to the C-17 Canal), the Florida Fish and Wildlife Conservation Commission's (FWC) *Standard Manatee Conditions for In-Water Work* will be incorporated into the construction documents in order to minimize any potential adverse effects to the manatee. The FDOT will require that the construction contractor abide strictly to the guidelines during construction.
- The USFWS' *Standard Protection Measures for the Eastern Indigo Snake* will be incorporated into the construction documents, in order to minimize any potential adverse effects to the indigo snake. The FDOT will require that the construction contractor abide strictly to the guidelines during construction.
- The FDOT Contractor Requirements for Unexpected Interaction with Certain Protected Species during Work Activities will be reviewed with and provided to the Contractor.
- No staging of construction equipment will occur in environmentally sensitive areas within or adjacent to the project corridor.

Section 9

References

- 1
- 2
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- 8 FWC. 2010. Water Bird Locator. Florida Fish and Wildlife Research Institute.
- 9 FWC. 2011. Biological Status Review Reports (various species). Tallahassee, FL.
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- 17 Peterson, R.T. 1980. A Field Guide to the Birds of Eastern and Central North America. Boston,
18 MA: Houghton Mifflin Company.
- 19 USFWS Wood Stork Active Florida Colonies Google Earth File:
20 <https://www.fws.gov/northflorida/woodstorks/wood-storks.htm>

Appendix A

ETDM Summary Report



Florida Department of Transportation

**RICK SCOTT
GOVERNOR**

605 Suwannee Street
Tallahassee, FL 32399-0450

**JIM BOXOLD
SECRETARY**

ETDM Summary Report

Project #14182 - SR-9/I-95 at Northlake Boulevard Interchange

Final Programming Screen - Published on 05/27/2015

Generated by Shandra Davis-Sanders (on behalf of FDOT District 4)

Printed on: 5/27/2015

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Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Alternative-specific information, consisting of descriptions of each alternative and associated road segments; an overview of ETAT Programming Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources.
- Project Scope information, consisting of general project recommendations resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

#14182 SR-9/I-95 at Northlake Boulevard Interchange

District: District 4

County: Palm Beach

Planning Organization: FDOT District 4

Plan ID: Not Available

Federal Involvement: Maintain Federal Eligibility Federal Action

Phase: Programming Screen

From:

To:

Financial Management No.: 43580312201

Contact Information: Richard Young (954) 777-4323 richard.young@dot.state.fl.us

Snapshot Data From: Programming Screen Summary Report Re-published on 05/27/2015 by Shandra Davis-Sanders

Issues and Categories are reflective of what was in place at the time of the screening event.

	Social and Economic							Cultural			Natural					Physical					
	Land Use Changes	Social	Relocation Potential	Farmlands	Aesthetic Effects	Economic	Mobility	Section 4(f) Potential	Historic and Archaeological Sites	Recreation Areas	Wetlands	Water Quality and Quantity	Floodplains	Wildlife and Habitat	Coastal and Marine	Noise	Air Quality	Contamination	Infrastructure	Navigation	Special Designations
Alternative #1	3	2	3	0	2	2	1	2	3	2	3	2	0	2	0	2	2	4	2	N/A	0
Re-Published: 05/27/2015 Reviewed from 07/29/2014 to 09/12/2014)																					

Purpose and Need

Purpose and Need

The purpose of the project is to enhance overall traffic operations at the existing interchange of SR-9/I-95 and Northlake Boulevard by providing improvements to achieve acceptable Levels of Service (LOS) at the interchange in the future condition (2040 Design Year). Conditions along Northlake Boulevard are anticipated to deteriorate below acceptable LOS standards if no improvements occur by 2040; the interchange will have insufficient capacity to accommodate the projected travel demand. The need for the project is based on the following primary and secondary criteria:

PRIMARY CRITERIA

CAPACITY/TRANSPORTATION DEMAND: Improve Operational Capacity and Overall Traffic Operations (Level of Service)

The project is anticipated to improve traffic operations at the SR-9/I-95 and Northlake Boulevard interchange and study area roadways/intersections by implementing operational and capacity improvements to meet the future travel demand projected as a result of Palm Beach County population and employment growth.

Based upon the traffic operations analysis conducted for the SR-9/I-95 at Northlake Boulevard interchange and adjacent signalized intersections [as documented in the *I-95 (SR-9) Interchange at Northlake Boulevard in Palm Beach County Interchange Concept Development Report*], the existing and future AM and PM peak hour traffic conditions for the five study intersections along Northlake Boulevard are as follows:

-Existing AM Peak Hour Conditions [2012/2013]-

Northlake Boulevard Intersection / Overall Intersection LOS (Delay in seconds per vehicle)

Keating Drive / C (23.4)

SR-9/I-95 Southbound Ramps / C (28.3)

SR-9/I-95 Northbound Ramps / D (53.2)

Roan Lane/ A (2.4)

Sunrise Drive-Sandtree Drive/ D (35.6)

-Existing PM Peak Hour Conditions [2012/2013]-

Northlake Boulevard Intersection / Overall Intersection LOS (Delay in seconds per vehicle)

Keating Drive / D (47.9)

SR-9/I-95 Southbound Ramps / C (29.3)

SR-9/I-95 Northbound Ramps / D (36.0)

Roan Lane/ A (2.2)

Sunrise Drive-Sandtree Drive/ F (80.7)

-Future AM Peak Hour Conditions [2040 Design Year No-Build]-

Northlake Boulevard Intersection / Overall Intersection LOS (Delay in seconds per vehicle)

Keating Drive / E (59.1)

SR-9/I-95 Southbound Ramps / E (80.0)

SR-9/I-95 Northbound Ramps / E (60.4)

Roan Lane/ A (2.8)

Sunrise Drive-Sandtree Drive/ F (83.2)

-Future PM Peak Hour Conditions [2040 Design Year No-Build]-

Northlake Boulevard Intersection / Overall Intersection LOS (Delay in seconds per vehicle)

Keating Drive / F (102.2)

SR-9/I-95 Southbound Ramps / D (53.0)

SR-9/I-95 Northbound Ramps / E (78.5)

Roan Lane/ A (1.0)

Sunrise Drive-Sandtree Drive/ F (103.8)

Although all of the intersections along Northlake Boulevard (except Sunrise Drive/Sandtree Drive) operate at LOS E or better under existing conditions, it should be noted that several of the individual through and turning movements at the intersections (which include the SR-9/I-95 on/off-ramp approaches) operate at LOS F during both the AM and PM peak periods. Without the proposed improvements, the intersections are projected to experience excessive delays and queuing and operate below acceptable LOS standards by the 2040 Design Year.

GROWTH MANAGEMENT: Accommodate Future Growth and Development

Commercial retail/office and residential land uses are located adjacent to the interchange. Commercial retail/office uses are located along Northlake Boulevard west of the SR-9/I-95 southbound ramps. Predominantly residential uses are located to the west of Congress Avenue, while residential and commercial retail uses are located to the east of SR-9/I-95. According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project area is to remain relatively unchanged.

While population within the vicinity of the interchange is anticipated to remain relatively the same with a projected growth of 3% from 2005 to 2035, employment is expected to increase by approximately 96% from 2005 to 2035 in the area northeast of the interchange. These projections are based on data derived from the enhanced Southeast Regional Planning Model (SERPM) version 6.5 Managed Lanes Model (upgraded to include specific subarea improvements for the I-95 Interchange Master Plan).

As such, the proposed improvements will be critical in supporting growth within the vicinity of the interchange and the overall vision of the City of Palm Beach Gardens and Palm Beach County.

SECONDARY CRITERIA

SAFETY: Improve Safety Conditions

The *I-95 (SR-9) Interchange at Northlake Boulevard in Palm Beach County Interchange Concept Development Report* included a safety analysis of the project area. The following provides a summary of the crash data and analysis results for the three-year period (2010 through 2012) for the ramp terminal intersections and approaches at the interchange:

Year / Number of Crashes

2010 / 51

2011 / 54

2012 / 48

Total Crashes: 153

Predominant Crash Type:Rear-end (82 / 54% of total)

FDOT's high crash location reports (for the period 2010 through 2012) provide those locations that have a higher crash rate as compared to crash rates for similar statewide roadways. The high crash locations along SR-9/I-95 within the area of influence include:

- SR-9/I-95 Northbound Off-Ramp (2011)
- SR-9/I-95 mainline between mileposts 34.600 and 34.800 (2010)

The proposed improvements are anticipated to provide additional through and turn lanes, as well as interchange ramp improvements, to help reduce conflict points and the potential occurrence of collisions at the interchange.

EMERGENCY EVACUATION: Enhance Emergency Evacuation and Response Times

SR-9/I-95 and Northlake Boulevard (from SR-9/I-95 to SR A1A) serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management. Also designated by Palm Beach County as evacuation facilities, SR-9/I-95 and Northlake Boulevard (from SR-9/I-95 to SR A1A) are critical in facilitating traffic flows during emergency evacuation periods as they connect other major arterials and highways of the state evacuation route network. The project is anticipated to:

- Improve emergency evacuation capabilities by enhancing connectivity and accessibility to SR-9/I-95 and other major arterials designated on the state evacuation route network from the west and east, and
- Increase the operational capacity of traffic that can be evacuated during an emergency event.

Project Description

This interchange improvement is one of seventeen being studied as part of the *I-95 Interchange Master Plan*. This plan will reexamine 1) the 2003 *I-95 Interchange Master Plan Study* and 2) the SR-9/I-95 mainline project, which added a High Occupancy Vehicle (HOV) lane and auxiliary lanes from south of Linton Boulevard to north of PGA Boulevard in Palm Beach County and included minor improvements to eight interchanges. Overall, the *I-95 Interchange Master Plan* will recommend new short-term and long-term improvements to interchanges based on changes in traffic volumes and updated design standards.

The SR-9/I-95 at Northlake Boulevard interchange is located on SR-9/I-95 between the PGA Boulevard interchange (1.73 miles to the north) and the Blue Heron Boulevard (SR 708) interchange (1.76 miles to the south) within the City of Palm Beach Gardens in eastern Palm Beach County. This interchange project proposes to improve interchange operations to address traffic spillback onto SR-9/I-95, reduce congestion, and increase safety. Based upon the traffic operations analysis conducted for the SR-9/I-95 at Northlake Boulevard interchange and adjacent signalized intersections [as documented in the *I-95 (SR-9) Interchange at Northlake Boulevard in Palm Beach County Interchange Concept Development Report* attached in the EST], the following preliminary short-term and long-term improvements have been identified for this interchange:

2020 Opening Year (Short-Term) Recommended Improvements

- Add an additional left-turn lane (triple) on the SR-9/I-95 northbound off-ramp.
- Add an additional lane (dual) on the SR-9/I-95 northbound on-ramp and an auxiliary lane on northbound SR-9/I-95 to accommodate a free-flow westbound-to-northbound right-turn lane.
- Add an additional left-turn lane (triple) on the SR-9/I-95 southbound off-ramp.
- Add an additional westbound left-turn lane (dual) on Northlake Boulevard at Keating Drive.
- Restripe northbound approach of Gardens Towne Square (Keating Drive) to provide an additional left-turn lane (dual) and one shared through/right-turn lane.

2040 Design Year (Long-Term) Recommended Improvements

- Add an additional left-turn lane (quadruple) on the SR-9/I-95 southbound off-ramp.
- Add one eastbound and westbound through lane to Northlake Boulevard from Military Trail to MacArthur Boulevard.
- Restripe northbound approach of Gardens Towne Square (Keating Drive) to provide an exclusive left-turn lane, one through lane and an exclusive right-turn lane.
- Add an additional eastbound left-turn lane (dual) on Northlake Boulevard at Sunrise Drive/Sandtree Drive.
- Add an exclusive southbound right-turn lane on Sunrise Drive at Northlake Boulevard.

SR-9/I-95 is currently a ten-lane divided interstate freeway from north of the Congress Avenue interchange (southern limit) to north of the PGA Boulevard interchange (northern limit) providing four general purpose lanes and one High Occupancy Vehicle (HOV) lane in each direction. Auxiliary lanes are also provided in both the northbound and southbound directions between PGA Boulevard to the north and Heron Boulevard to the south. North of Northlake Boulevard, SR-9/I-95 southbound provides one auxiliary lane between PGA Boulevard and Northlake Boulevard for a total of six southbound lanes. South of Northlake Boulevard, SR-9/I-95 provides one auxiliary lane in each direction between Blue Heron Boulevard and Northlake Boulevard resulting in a twelve-lane section. The existing right-of-way varies as it approaches the interchange, but the typical right-of-way ranges from approximately 300 to 725 feet. As part of the Strategic Intermodal System (SIS) and one of two major expressways (Florida's Turnpike being the other) that connect the major employment centers and residential areas of Miami-Dade, Broward and Palm Beach Counties, SR-9/I-95 serves an important role in facilitating the north-south movement of traffic in Southeast Florida.

Under the jurisdiction of Palm Beach County, Northlake Boulevard is a six-lane divided urban other principal arterial. Northlake Boulevard at the SR-9/I-95 overpass has dual left-turn lanes and a single right-turn lane in both the eastbound and westbound directions to access the SR-9/I-95 on-ramps. The existing right-of-way varies from approximately 150 to 200 feet west of SR-9/I-95 and 200 feet east of SR-9/I-95. Sidewalks and designated bicycle lanes are provided along both sides of Northlake Boulevard within the area of influence.

The interchange at SR-9/I-95 and Northlake Boulevard is a typical diamond configuration. Adjacent accessible signalized intersections relative to this interchange are located at Keating Drive (west) and Roan Lane and Sunrise Drive/Sandtree Drive (east). The ultimate interchange improvements (2040 Design Year Recommended Improvements) are likely to require additional right-of-way; however, the specific right-of-way requirements are not known at this time and will be determined through further analysis. Based on the Florida Department of Transportation's preliminary Long Range Estimate (LRE), the construction cost estimate for the improvements is \$10.3 million. Detailed cost estimates and right-of-way requirements will be derived as part of the Project Development and Environment (PD&E) Study.

CONSISTENCY WITH TRANSPORTATION PLAN GOALS AND OBJECTIVES

Funding in the amount of \$1,005,000 is programmed for the PD&E Study under Fiscal Year (FY) 2015 in both the FY 2015 - 2020 FDOT Work Program (FM #435803-1) and the FY 2015 - 2019 Transportation Improvement Program (TIP) of the Palm Beach Metropolitan Planning Organization (MPO). While the interchange improvements at SR-9/I-95 and Northlake Boulevard are not included in the Cost-Feasible component of the Palm Beach MPO 2035 Long Range Transportation Plan (LRTP), two highway projects in the vicinity of the interchange are provided in the LRTP Needs component: 1) implementation of Managed Lanes on SR-9/I-95 from the Palm Beach County/Broward County Line to Indiantown Road and 2) the proposed six-lane to eight-lane widening of Northlake Boulevard from Military Trail to SR A1A. The project is also not included in the current State Transportation Improvement Program (STIP). Coordination will occur with the Palm Beach MPO during the PD&E Study to identify and include funding for the project in the Palm Beach MPO 2035 LRTP Cost-Feasible component and the FDOT STIP prior to requesting Federal Highway Administration (FHWA) Location and Design Concept Acceptance.

Summary of Public Comments

Summary of Public Comments is not available at this time.

Planning Consistency Status

Are the limits consistent with the plans? Yes

Currently Adopted CFP-LRTP? No

Coordination will occur with the Palm Beach MPO during the PD&E Study to identify and include funding for the project in the Palm Beach MPO 2035 LRTP Cost-Feasible component and the FDOT STIP prior to requesting Federal Highway Administration (FHWA) Location and Design Concept Acceptance.

Attachments

TIP Pages - <https://www.fla-etat.org/est/servlet/blobViewer?blobID=17622>

Federal Consistency Determination

Lead Agency

Federal Highway Administration

Participating and Cooperating Agencies

Participating and Cooperating agencies are not applicable for this class of action.

Exempted Agencies

Agency Name	Justification	Date
Federal Transit Administration	FTA has requested to be exempt from reviewing any non-transit projects.	06/26/2014

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

User Defined Communities Within 500 Feet

- Palm Beach Gardens
- Roan Lane

Census Places Within 500 Feet

- Palm Beach Gardens

Purpose and Need Reviews

FDOT District 4

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/11/2014	Gaspar Jorge Padron (gaspar.padron@dot.state.fl.us)	No Purpose and Need comments found.

FL Department of Agriculture and Consumer Services

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/03/2014	Steve Bohl (Steve.Bohl@freshfromflorida.com)	No Purpose and Need comments found.

FL Department of Economic Opportunity

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/09/2014	Matt Preston (matt.preston@deo.myflorida.com)	No Purpose and Need comments found.

FL Department of Environmental Protection

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/12/2014	Lauren Milligan (lauren.milligan@dep.state.fl.us)	No Purpose and Need comments found.

FL Department of State

Acknowledgment	Date Reviewed	Reviewer	Comments
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Understood	08/20/2014	Ginny Jones (ginny.jones@dos.myflorida.com)	No Purpose and Need comments found.
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FL Fish and Wildlife Conservation Commission

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/14/2014	Scott Sanders (scott.sanders@myfwc.com)	No Purpose and Need comments found.

Federal Highway Administration

Acknowledgment	Date Reviewed	Reviewer	Comments
Accepted	09/12/2014	Luis Lopez, P.E. (luis.d.lopez@dot.gov)	<p>Purpose and Need:</p> <p>It is stated that the PD&E for the project is programmed in the Palm Beach MPO's Transportation Improvement Program (2015-2020) but not in the current LRTP. All projects within an MPO boundary that are included in the MPO's TIP a must come from the MPO's LRTP.</p> <p>When will the PD&E work begin on the project? The MPO is in the process of adopting their 2040 LRP Update. This project should be included in that updated Plan and as noted in the narrative, in the upcoming STIP.</p> <p>Reference is made in several sections (Consistency with Transportation Plans and Objectives and the Planning Consistency Status sections) that the project will be included in the 2035 LRTP. Will it be the 2035 LRTP or the 2040 LRTP? Since this project is in the programming screen vs the planning screen why are there not any public comments available in this ETAT Tool? This project, according to the narrative, is included in the MPO TIP for 2015. The TIP required public involvement and MPO discussion. Please include any feedback and input from these processes regarding this project. How does the public view this project? Has there been any controversy or negative public input on the need for this project or for the project impacts?</p> <p>Please include the estimate cost of this project. The narrative states that \$1million is programmed for the PD&E study in the FDOT Work Program and the MPO's TIP. Is the \$10.3 million for the Ultimate Interchange Improvements stated in the Description the cost for this project for all phases? Will federal funding be sought for any phases in this project? Please clearly identify what the project costs and phases are anticipated to be for the entire project as well as any programmed funds and project phasing in such a manner that is very clear to the public. This disclosure of information is an important element the public uses during their consideration of the project.</p> <p>Under the growth management section of the project description provided projected growth percentages for population and employment. But the years cited are 2005-2035. Please provide more updated information and data.</p>

National Marine Fisheries Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/12/2014	Brandon Howard (Brandon.Howard@noaa.gov)	None

National Park Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/05/2014	Anita Barnett (anita_barnett@nps.gov)	No Purpose and Need comments found.

Natural Resources Conservation Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	07/31/2014	Rick Robbins (rick.a.robbins@fl.usda.gov)	No Purpose and Need comments found.

South Florida Water Management District

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/18/2014	Mindy Parrott (mparrott@sfwmd.gov)	No Purpose and Need comments found.

US Army Corps of Engineers

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/18/2014	Garett Lips (Garett.G.Lips@usace.army.mil)	No Purpose and Need comments found.

US Coast Guard

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	07/29/2014	Darayl Tompkins (Darayl.Tompkins@uscg.mil)	No involvement.

US Environmental Protection Agency

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/08/2014	Maher Budeir (budeir.maher@epa.gov)	No Purpose and Need comments found.

US Fish and Wildlife Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	07/29/2014	John Wrublik (john_wrublik@fws.gov)	No Purpose and Need comments found.

The following organizations were notified but did not submit a review of the Purpose and Need:

- Seminole Tribe of Florida

Alternative #1

Alternative Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
Alternative was not named.	?	?	Traffic Operation Enhancement	ETAT Review Complete	? mi.	\$10,300,000.00	Roadway	Y

Project Effects Overview for Alternative #1

Issue	Degree of Effect		Organization	Date Reviewed
Social and Economic				
Land Use Changes	2	Minimal	FDOT District 4	09/11/2014
Land Use Changes	3	Moderate	FL Department of Economic Opportunity	09/09/2014
Social	2	Minimal	US Environmental Protection Agency	09/11/2014
Social	2	Minimal	FDOT District 4	09/11/2014
Relocation Potential	3	Moderate	FDOT District 4	09/11/2014
Farmlands	0	None	Natural Resources Conservation Service	07/31/2014
Aesthetic Effects	2	Minimal	FDOT District 4	09/11/2014
Economic	2	Minimal	FDOT District 4	09/11/2014
Economic	0	None	FL Department of Economic Opportunity	09/09/2014
Mobility	1	Enhanced	FDOT District 4	09/11/2014
Cultural				
Historic and Archaeological Sites	3	Moderate	FL Department of State	08/20/2014
Recreation Areas	0	None	FL Department of Environmental Protection	09/12/2014
Recreation Areas	0	None	US Environmental Protection Agency	09/08/2014
Recreation Areas	0	None	South Florida Water Management District	08/18/2014
Recreation Areas	N/A	N/A / No Involvement	National Park Service	08/05/2014
Natural				
Wetlands	2	Minimal	FL Department of Environmental Protection	09/12/2014
Wetlands	0	None	US Environmental Protection Agency	09/08/2014
Wetlands	0	None	US Army Corps of Engineers	08/18/2014
Wetlands	2	Minimal	South Florida Water Management District	08/18/2014
Wetlands	0	None	National Marine Fisheries Service	08/12/2014
Wetlands	3	Moderate	US Fish and Wildlife Service	07/29/2014
Water Quality and Quantity	2	Minimal	FL Department of Environmental Protection	09/12/2014
Water Quality and Quantity	2	Minimal	US Environmental Protection Agency	09/11/2014

Water Quality and Quantity	2	Minimal	South Florida Water Management District	08/18/2014
Floodplains	0	None	US Environmental Protection Agency	09/08/2014
Floodplains	0	None	South Florida Water Management District	08/18/2014
Wildlife and Habitat	2	Minimal	FL Fish and Wildlife Conservation Commission	08/14/2014
Wildlife and Habitat	2	Minimal	US Fish and Wildlife Service	07/29/2014
Coastal and Marine	0	None	South Florida Water Management District	08/18/2014
Coastal and Marine	0	None	National Marine Fisheries Service	08/12/2014
Physical				
Air Quality	2	Minimal	US Environmental Protection Agency	09/11/2014
Contamination	3	Moderate	FL Department of Environmental Protection	09/12/2014
Contamination	4	Substantial	US Environmental Protection Agency	09/11/2014
Contamination	2	Minimal	South Florida Water Management District	08/18/2014
Navigation	N/A	N/A / No Involvement	US Army Corps of Engineers	08/18/2014
Navigation	N/A	N/A / No Involvement	US Coast Guard	07/29/2014
Special Designations				
Special Designations	0	None	US Environmental Protection Agency	09/08/2014
Special Designations	0	None	South Florida Water Management District	08/18/2014

ETAT Reviews and Coordinator Summary: Social and Economic

Land Use Changes

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/21/2014 by FDOT District 4

Comments:

FDEO reported that while the project improvements are generally consistent within the planning horizons of the Palm Beach County and City of Palm Beach Gardens Comprehensive Plans, the City of Palm Beach Gardens has concerns about the 2040 long-term improvements (particularly the widening of Northlake Boulevard due to its potential to impact several property owners). FDEO noted that the project is not located in an Area of Critical State Concern or within the Coastal High Hazard Area and does not encroach on a military base; the project is located within the Northlake Corridor Overlay County Special Planning Area and the Revitalization and Redevelopment Infill Overlay, as well as next to the Biotechnology Research Protection Overlay. The project is included in the FY 2014 - 2019 FDOT Work Program and the Palm Beach Metropolitan Planning Organization (MPO) FY 2015 - 2019 Transportation Improvement Program (TIP). It is not identified in the Palm Beach MPO Cost Feasible 2035 Long Range Transportation Plan (LRTP) or the State Transportation Improvement Program (STIP). While the project is expected to accommodate expanding commercial retail/office activities around the interchange, a Summary DOE of Moderate has been assigned to the Land Use Changes issue due to concerns expressed by FDEO and the City of Palm Beach Gardens.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach MPO and the City of Palm Beach Gardens to obtain feedback from residents and businesses that may be impacted by the interchange improvement. FDOT District Four will also coordinate with the City of Palm Beach Gardens and the Palm Beach MPO to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Palm Beach Gardens Comprehensive Plan and is consistent with the adopted Palm Beach MPO LRTP and 2) funding is identified for all future project phases in the TIP, LRTP, STIP, and FDOT SIS Cost Feasible Plan.

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

City of Palm Beach Gardens Future Land Use Map
Palm Beach County Future Land Use Map

100-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

2008 SFWMD FL Land Use and Land Cover / Acres / Percent

- 1210 FIXED SINGLE FAMILY UNITS / 9.7 / 8.48%
- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 6.7 / 5.83%
- 1400 COMMERCIAL AND SERVICES / 21.0 / 18.30%
- 1411 SHOPPING CENTERS / 13.4 / 11.64%
- 5120 CHANNELIZED WATERWAYS - CANALS / 0.1 / 0.09%
- 8140 ROADS AND HIGHWAYS / 64.0 / 55.67%

500-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Parks (2)

- LAKE CATHERINE PARK

- LAKE CATHERINE SPORTS COMPLEX

2008 SFWMD FL Land Use and Land Cover / Acres / Percent

- 1210 FIXED SINGLE FAMILY UNITS / 74.6 / 21.90%
- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 54.6 / 16.01%
- 1400 COMMERCIAL AND SERVICES / 83.7 / 24.57%
- 1411 SHOPPING CENTERS / 55.9 / 16.38%
- 5120 CHANNELIZED WATERWAYS - CANALS / 0.7 / 0.21%
- 8140 ROADS AND HIGHWAYS / 71.4 / 20.93%

1,320-Foot (Quarter-Mile) Buffer:

2010 Census Designated Places (2)

- PALM BEACH GARDENS

- LAKE PARK

Community Boundaries (3)

- PALM BEACH GARDENS

- LAKE PARK

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Parks (2)

- LAKE CATHERINE PARK

- LAKE CATHERINE SPORTS COMPLEX

2008 SFWMD FL Land Use and Land Cover / Acres / Percent

- 1110 FIXED SINGLE FAMILY UNITS / 18.1 / 2.14%
- 1210 FIXED SINGLE FAMILY UNITS / 290.3 / 34.34%
- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 160.5 / 18.99%
- 1400 COMMERCIAL AND SERVICES / 131.8 / 15.60%
- 1411 SHOPPING CENTERS / 112.5 / 13.31%
- 1700 INSTITUTIONAL / 4.2 / 0.49%
- 1710 EDUCATIONAL FACILITIES / 0.6 / 0.07%
- 1850 PARKS AND ZOOS / 10.6 / 1.25%
- 1900 OPEN LAND / 6.1 / 0.72%
- 1920 INACTIVE LAND WITH STREET PATTERNS / 3.3 / 0.39%
- 3100 HERBACEOUS (DRY PRAIRIE) / 3.4 / 0.40%
- 5120 CHANNELIZED WATERWAYS - CANALS / 10.1 / 1.20%
- 5300 RESERVOIRS / 8.6 / 1.01%
- 8140 ROADS AND HIGHWAYS / 85.3 / 10.09%

Comments on Effects to Resources:

The SR-9/I-95 at Northlake Boulevard interchange occurs within the City of Palm Beach Gardens. The area surrounding the interchange is urbanized. Commercial retail/office uses are located along Northlake Boulevard (north and south) both east and west of SR-9/I-95. Residential uses within the area are primarily buffered by the commercial uses along Northlake Boulevard; however, they are adjacent to SR-9/I-95 further north and south. A mix of commercial retail/office and residential activities exist southeast of the interchange as part of the Northlake Boulevard Planned Unit Development. According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project is expected to support the vision of both Palm Beach County and the City of Palm Beach Gardens as it will accommodate the expanding employment growth in the area supported by the established Planned Unit Development (Northlake Boulevard), City of Pam Beach Gardens Northlake Boulevard Overlay Zone, and growing commercial retail/office uses around the interchange. Effects on the area's character resulting from the minor additional right-of-way required as part of the interchange improvement are anticipated to be minimal.

Transportation Plan Consistency:

Funding for the project PD&E Study is programmed in both the FY 2015 - 2020 FDOT Work Program (FM #435803-1) and the FY 2015 - 2019 Transportation Improvement Program (TIP) of the Palm Beach Metropolitan Planning Organization (MPO). While the SR-9/I-95 and Northlake Boulevard interchange improvement is not included in the Cost-Feasible component of the Palm Beach MPO 2035 Long Range Transportation Plan (LRTP), two highway projects in the vicinity of the interchange are provided in the LRTP Needs component. The project is also not included in the current State Transportation Improvement Program (STIP). Coordination will occur with the Palm Beach MPO during the PD&E Study to identify and include funding for the project in the Palm Beach MPO 2035 LRTP Cost-Feasible component and the FDOT STIP prior to requesting Federal Highway Administration (FHWA) Location and Design Concept Acceptance.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:**

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach MPO and the City of Palm Beach Gardens to obtain feedback from residents and businesses that may be impacted by the interchange improvement. FDOT District Four will also coordinate with the City of Palm Beach Gardens and the Palm Beach MPO to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Palm Beach Gardens Comprehensive Plan and is consistent with the adopted Palm Beach MPO LRTP and 2) funding is identified for all future project phases in the TIP, LRTP, STIP, and FDOT SIS Cost Feasible Plan.

Indirect Effects**Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

Degree of Effect: **3** *Moderate* assigned 09/09/2014 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

City of Palm Beach Gardens Comprehensive Plan, initially adopted December 18, 2008; and, *Palm Beach County 1989 Comprehensive Plan*, as amended (most recent amendment, 2014).

Comments on Effects to Resources:

The improvements that are within the City's and County's planning horizons are consistent with the Plans. The 2060 improvements are outside of both plan's planning horizons (2040) and the local governments identify the road as one that they do not anticipate adding laneage.

City of Palm Beach Gardens staff is aware of and supports the 2020 list of short-term recommended improvements contained within the report.

Palm Beach County staff responded that the described project was compatible with the community's development goals.

The 2040 long-term improvements, however, have the potential to impact several property owners along the Northlake Boulevard Corridor. From a broad perspective, City staff has concerns on these improvements, particularly the proposed additional eastbound and westbound through lane from Military to MacArthur Boulevard.

Palm Beach Gardens does not have a Future Transportation Map. Palm Beach County has no Future Transportation Map *per se*, but does have a Functional Classification Map and a Thoroughfare Identification Map. However, the project is not shown on either map. It is recommended that the City and County adopt a Future Transportation Map consistent with Section 163.3177(b)1, F.S. The Future Land Use Map (FLUM) of the Comprehensive Plans show several future land uses surrounding the project, which include the following future land uses: Palm Beach Gardens - Commercial with Northlake Boulevard Overlay Zone and Residential Medium. Palm Beach County - High Residential 8, High Residential 12, Institutional & Public Facilities, and Medium Residential 5.

The project is located within the (County's) Northlake Corridor Overlay County Special Planning Area and is located close to the (County's) Biotechnology Research Protection Overlay. Portions of the land area in the NE quadrant of the intersection are located within the County's Revitalization and Redevelopment Infill Overlay; the remainder is assigned to the County's Urban/Suburban Tier, in terms of the County's Managed Growth Tier System classification.

The project is not located within a quarter mile of any City or County parks.

The project is not located in an Area of Critical State Concern, does not encroach on a military base, and is not located within the Coastal High Hazard Area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Land Use Changes issue for this alternative:
Federal Highway Administration

Social

Project Effects

Coordinator Summary Degree of Effect: 2 Minimal assigned 11/21/2014 by FDOT District 4

Comments:

While access to residences and businesses could temporarily be affected and/or modified as a result of the interchange improvement, overall impacts on the social environment and community cohesion are anticipated to be limited as the project will

accommodate the expanding employment growth in the area supported by the established Planned Unit Development (Northlake Boulevard) and growing commercial retail/office uses around the interchange. For this reason, a Summary DOE of Minimal has been assigned to the Social issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit input from the general public to ensure that both the social and transportation needs of the community are addressed through the project. To avoid and/or minimize potential impacts to the greatest extent practicable, FDOT District Four will also prepare an Air Quality Technical Memorandum (see Air Quality issue), Noise Study Report (see Noise issue), and Sociocultural Effects Evaluation (in accordance with Part 2, Chapter 9 of the FDOT PD&E Manual) with particular focus on civil rights and environmental justice considerations. It should additionally be noted that Limited English Proficiency (LEP) accommodations will be required during public outreach.

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Social services facilities, health care facilities, and religious facilities within 500 feet of the proposed project.

Comments on Effects to Resources:

The proposed project is within 500 feet of several social service and health care and religious facilities. Potential impact on these facilities should be specifically defined and avoided when possible. An outreach effort coupled with specific plan on mitigating any unavoidable impact on these facilities are recommended.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

100-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS
- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Community Centers (1)

- LEUKEMIA & LYMPHOMA SOCIETY

Geocoded Health Care Facilities (2)

- DR. BERNSTEIN HEALTH & DIET CLINIC
- NORTHLAKE MEDICAL CENTER

Geocoded Religious Centers (1)

- CHRISTIAN RAYMOND M PA

Geocoded Social Service Facilities (4)

- ERE ASSOCIATES
- THURSTON NANCY LCSW
- CHRISTIAN RAYMOND M PA
- GOODWILL INDUSTRIES

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)

FDOT RCI Bridges (1)

- 930516

Noise Barriers (5)

Bus Transit Routes (2)

- ROUTE 20 - GARDENS MALL TO ST MARY
- ROUTE 3 - PBG TO BOCA VIA MILITARY

Transportation Disadvantaged Service Provider Areas in Florida-2010 (2)

- PALM TRAN CONNECTION
- MV CONTRACT TRANSPORTATION, INC.

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

500-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS
- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Community Centers (1)

- LEUKEMIA & LYMPHOMA SOCIETY

Geocoded Health Care Facilities (4)

- DR. BERNSTEIN HEALTH & DIET CLINIC
- NORTHLAKE MEDICAL CENTER
- MD NOW MEDICAL CENTERS INC.
- PALM BEACH MEDICAL CLINIC

Geocoded Parks (2)

- LAKE CATHERINE PARK
- LAKE CATHERINE SPORTS COMPLEX

Geocoded Religious Centers (4)

- CHRISTIAN RAYMOND M PA
- DIOCESE-SOUTHEAST FLORIDA
- ISLAMIC CENTER OF PALM BEACH
- COVENANT CENTRE INTERNATIONAL

Geocoded Social Service Facilities (12)

Group Care Facilities (3)

- SWISS HOUSE
- NORMA ANSELMO
- THE CHILDREN'S ACADEMY AT COVE

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)

FDOT RCI Bridges (1)

- 930516

Noise Barriers (5)

Bus Transit Routes (2)

- ROUTE 20 - GARDENS MALL TO ST MARY
- ROUTE 3 - PBG TO BOCA VIA MILITARY

Transportation Disadvantaged Service Provider Areas in Florida-2010 (2)

- PALM TRAN CONNECTION
- MV CONTRACT TRANSPORTATION, INC.

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

1,320-Foot (Quarter-Mile) Buffer:**2010 Census Designated Places (2)**

- PALM BEACH GARDENS
- LAKE PARK

Community Boundaries (3)

- PALM BEACH GARDENS
- LAKE PARK
- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Community Centers (2)

- LEUKEMIA & LYMPHOMA SOCIETY
- MASONIC TEMPLE ASSOCIATION

Geocoded Health Care Facilities (4)

- DR. BERNSTEIN HEALTH & DIET CLINIC
- NORTHLAKE MEDICAL CENTER
- MD NOW MEDICAL CENTERS INC.
- PALM BEACH MEDICAL CLINIC

Geocoded Homeowner and Condominium Associations (2)

- DOVE LANDING, A CONDO
- ODYSSEY CONDO

Geocoded Laser Facilities (3)

- LASER & BEAUTY (3)

Geocoded Parks (2)

- LAKE CATHERINE PARK
- LAKE CATHERINE SPORTS COMPLEX

Geocoded Religious Centers (6)

- CHRISTIAN RAYMOND M PA
- DIOCESE-SOUTHEAST FLORIDA
- ISLAMIC CENTER OF PALM BEACH
- COVENANT CENTRE INTERNATIONAL
- NATIVITY LUTHERAN CHURCH
- CHURCH IN THE GARDENS

Geocoded Schools (4)

- BARRY UNIVERSITY - NORTH PALM BEACH CAMPUS
- HOLLAND NORTHLAKE DAY SCHOOL
- CHURCH IN THE GARDENS SCHOOL
- NATIVITY LUTHERAN CHURCH & SCHOOL

Geocoded Social Service Facilities (20)**Group Care Facilities (12)****Florida Site File Resource Groups (1)**

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)**FDOT RCI Bridges (4)**

- 930267
- 930268
- 930516
- 930517

Noise Barriers (9)**Bus Transit Routes (2)**

- ROUTE 20 - GARDENS MALL TO ST MARY

- ROUTE 3 - PBG TO BOCA VIA MILITARY

Transportation Disadvantaged Service Provider Areas in Florida-2010 (2)

- PALM TRAN CONNECTION

- MV CONTRACT TRANSPORTATION, INC.

Facility Crossings (3)

- NORTHLAKE BOULEVARD

- HOLLY DRIVE

- DRAINAGE DITCH

2008 SFWMD FL Land Use and Land Cover / Acres / Percent

- 1110 FIXED SINGLE FAMILY UNITS / 18.1 / 2.14%

- 1210 FIXED SINGLE FAMILY UNITS / 290.3 / 34.34%

- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 160.5 / 18.99%

- 1400 COMMERCIAL AND SERVICES / 131.8 / 15.60%

- 1411 SHOPPING CENTERS / 112.5 / 13.31%

- 1700 INSTITUTIONAL / 4.2 / 0.49%

- 1710 EDUCATIONAL FACILITIES / 0.6 / 0.07%

- 1850 PARKS AND ZOOS / 10.6 / 1.25%

- 1900 OPEN LAND / 6.1 / 0.72%

- 1920 INACTIVE LAND WITH STREET PATTERNS / 3.3 / 0.39%

- 3100 HERBACEOUS (DRY PRAIRIE) / 3.4 / 0.40%

- 5120 CHANNELIZED WATERWAYS - CANALS / 10.1 / 1.20%

- 5300 RESERVOIRS / 8.6 / 1.01%

- 8140 ROADS AND HIGHWAYS / 85.3 / 10.09%

Comments on Effects to Resources:

By improving operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) accommodate the future travel demand projected as a result of Palm Beach County population and employment growth and 2) allow SR-9/I-95 to continue to serve as a critical arterial in facilitating the north-south movement of traffic in Southeast Florida as it connects major employment centers, residential areas, and other regional destinations between Miami-Dade, Broward and Palm Beach Counties.

The SR-9/I-95 at Northlake Boulevard interchange occurs within the City of Palm Beach Gardens. The area surrounding the interchange is urbanized. Commercial retail/office uses are located along Northlake Boulevard (north and south) both east and west of SR-9/I-95. Residential uses within the area are primarily buffered by the commercial uses along Northlake Boulevard; however, they are adjacent to SR-9/I-95 further north and south. A mix of commercial retail/office and residential activities exist southeast of the interchange as part of the Northlake Boulevard Planned Unit Development. According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project area is to continue to support commercial retail/office and residential uses.

Community features that occur within the vicinity of the project include: two community centers, fourth health care facilities, two homeowner and condominium associations, three laser facilities, two parks, six religious centers, four schools, social service and group care facilities, two bus transit routes, two transportation disadvantaged services, and cultural resources.

The table below presents the demographic data for both the 500-foot project buffer and Palm Beach County. According to the EST GIS analysis results, the demographic profile of the buffer area is comparable to the profile of Palm Beach County as a whole. However, the buffer area contains higher White and Other population percentages and notably lower African-American and Hispanic population percentages. The buffer area also contains a slightly higher percentage of individuals under age 18 and a notably lower percentage of persons of age 65 or above compared to the county population. In addition, the buffer area has a notable percentage of housing units with no vehicle available and a higher median family income (\$6,739 more) as compared to Palm Beach County.

Demographic / 500-Foot Buffer / Palm Beach County

White (Race)* / 78.2% / 73.5%

African-American (Race)* / 11.5% / 17.3%

"Other" *** (Race)* / 10.3% / 9.2%

Hispanic (Ethnic Group)* / 11.2% / 19.0%

Age 65+** / 16.0% / 21.6%

Under Age 18** / 21.7% / 20.4%

Housing Units with No Vehicle Available** / 5.5% / 6.2%

Averaged Median Family Income** / \$71,184 / \$64,445

* Source: US Census Bureau (2010 US Census)

** Source: US Census Bureau (2010 American Community Survey)

*** "Other" includes American Indian & Alaska Native, Asian, Native Hawaiian & Other Pacific Islander, & Other Race.

It should be noted that 12 census blocks within the 500-foot project buffer contain a minority population greater than 40%. A total of 3,030 individuals comprise the minority population of these census blocks. It should further be noted that 920 persons within the 500-foot project buffer (7.76% of the total buffer population) indicated a deficiency in English proficiency. Limited English Proficiency (LEP) accommodations will be required during the Project Development phase as the demographic data indicates that 5.0% or 1,000 persons or more in a project area speak a language other than English (per Part 1, Chapter 11, Section 11-1.2.4 of the FDOT PD&E Manual).

The project is expected to support the vision of both Palm Beach County and the City of Palm Beach Gardens as it will accommodate the expanding employment growth in the area supported by the established Planned Unit Development (Northlake Boulevard) and growing commercial retail/office uses around the interchange. While access to residences and businesses could temporarily be affected and/or modified as a result of the interchange improvement, overall impacts of the project on the social environment and community cohesion are anticipated to be minimal.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit input from the general public to ensure that both the social and transportation needs of the community are addressed through the project.

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Social issue for this alternative: Federal Highway Administration

Relocation Potential

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/21/2014 by FDOT District 4

Comments:

The proposed project is anticipated to require additional right-of-way along the northern and southern portions of Northlake Boulevard, both east and west of the interchange. The acquisition of new right-of-way has the potential to impact approximately nineteen commercial businesses located west of the interchange between Military Trail and SR-9/I-95 and approximately ten commercial businesses east of the interchange between MacArthur Boulevard and SR-9/I-95. Of these businesses, only two are likely to require relocation; no residences have the potential to be impacted. Further, access to businesses and residences could temporarily be affected and/or modified during project construction. For these reasons, a Summary DOE of Moderate has been assigned to the Relocation Potential issue.

A Conceptual Stage Relocation Plan will be prepared during the Project Development stage if relocations are determined to be necessary. Potential relocation effects should be assessed further during Project Development as more detailed and finalized project information regarding right-of-way needs becomes available. The proposed interchange improvements will be adjusted so as to avoid or minimize impacts to identified features.

Degree of Effect: 3 *Moderate* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Direct Effects

Identified Resources and Level of Importance:

100-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS
- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Health Care Facilities (2)

- DR. BERNSTEIN HEALTH & DIET CLINIC
- NORTHLAKE MEDICAL CENTER

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)

FDOT RCI Bridges (1)

- 930516

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

SFWMD Residential Areas 2008

- 1210 FIXED SINGLE FAMILY UNITS / 9.7 / 8.48%
- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 6.7 / 5.83%

500-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS
- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Health Care Facilities (4)

- DR. BERNSTEIN HEALTH & DIET CLINIC
- NORTHLAKE MEDICAL CENTER
- MD NOW MEDICAL CENTERS INC.
- PALM BEACH MEDICAL CLINIC

Geocoded Parks (2)

- LAKE CATHERINE PARK
- LAKE CATHERINE SPORTS COMPLEX

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)

FDOT RCI Bridges (1)

- 930516

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

SFWMD Residential Areas 2008

- 1210 FIXED SINGLE FAMILY UNITS / 74.6 / 21.90%
- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 54.6 / 16.01%

Comments on Effects to Resources:

The interchange at SR-9/I-95 and Northlake Boulevard is a typical diamond configuration. SR-9/I-95 is currently a ten-lane divided interstate freeway from north of the Congress Avenue interchange (southern limit) to north of the PGA Boulevard interchange (northern limit) providing four general purpose lanes and one High Occupancy Vehicle (HOV) lane in each direction. Auxiliary lanes are also provided in both the northbound and southbound directions between PGA Boulevard and Heron Boulevard. North of Northlake Boulevard, SR-9/I-95 southbound provides one auxiliary lane between PGA Boulevard and Northlake Boulevard for a total of six southbound lanes. South of Northlake Boulevard, SR-9/I-95 provides one auxiliary lane in each direction between Blue Heron Boulevard and Northlake Boulevard resulting in a twelve-lane section. The existing right-of-way at the interchange ranges from approximately 300 to 725 feet. Northlake Boulevard is a six-lane divided urban other principal arterial. The existing right-of-way varies from approximately 150 to 200 feet west of SR-9/I-95 and 200 feet east of SR-9/I-95.

The proposed project is anticipated to require additional right-of-way along the northern and southern portions of Northlake Boulevard, both east and west of the interchange. Northlake Boulevard is to be widened to accommodate both eastbound and westbound through lanes, turning lanes, bike lanes, sidewalks, and curb and gutter. These improvements, including the addition of a dedicated right-turn and shared through/right lane at the northwest corner of the Sunrise Drive and Northlake Boulevard intersection and the southern shift of the SR-9/I-95 southbound on-ramp to accommodate the additional eastbound through lane, will result in acquisition of new right-of-way. These improvements have the potential to impact approximately nineteen commercial businesses located west of the interchange between Military Trail and SR-9/I-95 and approximately ten commercial businesses east of the interchange between MacArthur Blvd and SR-9/I-95. Of these businesses, a gas station located at the northeast corner of the Military Trail and Northlake Boulevard intersection and a McDonald's restaurant located at the northwest corner of the Sunrise Drive and Northlake Boulevard intersection are the only businesses likely to require relocation. No residences have the potential to be impacted. Further, access to businesses and residences could temporarily be affected and/or modified during project construction. For these reasons, moderate involvement regarding relocation potential is anticipated.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

It is recommended that further assessment of relocation effects be conducted during the Project Development phase as more detailed and finalized project information regarding right-of-way needs becomes available. The proposed interchange improvements will be adjusted so as to avoid or minimize impacts to identified features. A Conceptual Stage Relocation Plan will be prepared if relocations are determined to be necessary.

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Relocation Potential issue for this alternative:
Federal Highway Administration

Farmlands

Project Effects

Coordinator Summary Degree of Effect: 0 None assigned 11/21/2014 by FDOT District 4

Comments:

NRCS determined that there are no Prime, Unique or Locally Important Farmland soils within any of the project buffers. In addition, the project is located within the Miami Urbanized Area. According to Part 2, Chapter 28, Section 28-2.1 of the FDOT PD&E Manual, transportation projects situated within urbanized areas with no adjacent present or future agricultural lands are excluded from Farmland Assessments. Since the project is located within a designated urban area anticipated to continue to support residential and industrial uses, a Summary DOE of None has been assigned to the Farmlands issue.

Degree of Effect: 0 None assigned 07/31/2014 by Rick Allen Robbins, Natural Resources Conservation Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

The USDA-NRCS considers soil map units with important soil properties for agricultural uses to be Prime Farmland. In addition, the USDA-NRCS considers any soils with important soil properties and have significant acreages that are used in the production of commodity crops (such as, cotton, citrus, row crops, specialty crops, nuts, etc.) to be considered as Farmlands of Unique Importance or Farmlands of Local Importance. Nationally, there has been a reduction in the overall amount of Prime and Unique Farmlands through conversion to non-farm uses. This trend has the possibility of impacting the nation's food supply and exporting capabilities.

Comments on Effects to Resources:

Conducting GIS analysis of Prime Farmland (using USDA-NRCS data) and Important (Prime, Unique, Local) Farmland Analysis (using existing SFWMD land use data and 2010 SSURGO data) has resulted in the determination that there are no Prime, Unique, or Locally Important Farmland soils within any buffer width within the Project Area. Therefore, no degree of effect to agricultural resources.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Farmlands issue for this alternative: Federal Highway Administration

Aesthetic Effects

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

The project is consistent with the area's future land use vision as it is expected to accommodate the expanding employment growth in the area supported by the established Northlake Boulevard Planned Unit Development, City of Palm Beach Gardens Northlake Boulevard Overlay Zone, and growing commercial retail/office uses around the interchange. Given the urban nature of the surrounding project area, impacts to aesthetics/the existing visual environment should be limited. Therefore, a Summary DOE of Minimal has been assigned to the Aesthetic Effects issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit opinions and preferences from residents and businesses on potential project effects and general design concepts related to aesthetics.

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

100-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)**FDOT RCI Bridges (1)**

- 930516

Facility Crossings (2)

- NORTHLAKE BOULEVARD

- DRAINAGE DITCH

SFWMD Residential Areas 2008

- 1210 FIXED SINGLE FAMILY UNITS / 9.7 / 8.48%

- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 6.7 / 5.83%

500-Foot Buffer:**2010 Census Designated Places (1)**

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

Geocoded Parks (2)

- LAKE CATHERINE PARK

- LAKE CATHERINE SPORTS COMPLEX

Group Care Facilities (3)

- SWISS HOUSE

- NORMA ANSELMO

- THE CHILDREN'S ACADEMY AT COVE

Florida Site File Resource Groups (1)

- MILITARY TRAIL (ROAD) [PB13795]

Cultural Field Survey Areas (3)**FDOT RCI Bridges (1)**

- 930516

Facility Crossings (2)

- NORTHLAKE BOULEVARD

- DRAINAGE DITCH

SFWMD Residential Areas 2008

- 1210 FIXED SINGLE FAMILY UNITS / 74.6 / 21.90%

- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 54.6 / 16.01%

Comments on Effects to Resources:

Notable community features associated with aesthetics within the 500-foot project buffer include: 129.2 acres of residential uses (including a Planned Unit Development), two parks, three group care facilities, and cultural resources. Impacts to aesthetics/the existing visual environment as a result of the interchange improvement are anticipated to be minimal given the urbanized nature of the area and the fact that the project supports the area's land use vision.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:**

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit opinions and preferences from residents and businesses on potential project effects and general design concepts related to aesthetics.

Indirect Effects**Identified Resources and Level of Importance:**

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Aesthetic Effects issue for this alternative: Federal Highway Administration

Economic

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

By improving operational capacity and overall traffic operations, the project is intended to accommodate future travel demand as a result of expanding employment growth within the vicinity of the interchange. In addition, the improvements will enhance access to SR-9/I-95, US 1, and the Beeline Highway (from the east and west) and other major transportation facilities and employment centers (including freight facilities) of Southeast Florida. Due to two potential business relocations and the fact that access to residences and businesses could temporarily be affected and/or modified during construction, a Summary DOE of Minimal has been assigned to the Economic issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit input from residents and businesses (located within the vicinity of the interchange) regarding potential economic enhancements/impacts (particularly access to businesses) as a result of the project.

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

100-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

500-Foot Buffer:

2010 Census Designated Places (1)

- PALM BEACH GARDENS

Community Boundaries (2)

- PALM BEACH GARDENS

- ROAN LANE

Planned Unit Developments (1)

- NORTHLAKE BOULEVARD

2008 SFWMD FL Land Use and Land Cover / Acres / Percent

- 1210 FIXED SINGLE FAMILY UNITS / 74.6 / 21.90%

- 1330 MULTIPLE DWELLING UNITS - LOW RISE / 54.6 / 16.01%

- 1400 COMMERCIAL AND SERVICES / 83.7 / 24.57%

- 1411 SHOPPING CENTERS / 55.9 / 16.38%

- 5120 CHANNELIZED WATERWAYS - CANALS / 0.7 / 0.21%

- 8140 ROADS AND HIGHWAYS / 71.4 / 20.93%

Comments on Effects to Resources:

The SR-9/I-95 at Northlake Boulevard interchange occurs within the City of Palm Beach Gardens. The area surrounding the interchange is urbanized. Commercial retail/office uses are located along Northlake Boulevard (north and south) both east and west of SR-9/I-95. Residential uses within the area are primarily buffered by the commercial uses along Northlake Boulevard; however, they are adjacent to SR-9/I-95 further north and south. A mix of commercial retail/office and residential activities exist southeast of the interchange as part of the Northlake Boulevard Planned Unit Development. According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the project is expected to accommodate the expanding employment growth in the area supported by the established Planned Unit Development (Northlake Boulevard), City of Pam Beach Gardens Northlake Boulevard Overlay Zone, and growing commercial retail/office uses around the interchange.

While population within the vicinity of the interchange is anticipated to remain relatively the same with a projected growth of 3% from 2005 to 2035, employment is expected to increase by approximately 96% from 2005 to 2035 in the area northeast of the interchange.

By improving operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) accommodate the future travel demand projected as a result of Palm Beach County population and employment growth; 2) allow for more efficient access to SR-9/I-95, US 1, and the Beeline Highway from the east and west along Northlake Boulevard; and 3) maintain viable access to businesses along Northlake Boulevard and the major transportation facilities and employment centers of Southeast Florida (including connectors to freight activity centers/local distribution facilities or between the regional freight corridors).

While economic enhancements are generally expected since the improvements are consistent with economic development efforts of the area, access to residences and businesses could temporarily be affected and/or modified during construction. Overall, economic effects as a result of the interchange improvement are anticipated to be minimal.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:**

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit input from residents and businesses (located within the vicinity of the interchange) regarding potential economic enhancements/impacts (particularly access to businesses) as a result of the project.

Indirect Effects**Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

Degree of Effect: 0 None assigned 09/09/2014 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects**Identified Resources and Level of Importance:**

City of Palm Beach Gardens Comprehensive Plan, initially adopted December 18, 2008; and, *Palm Beach County 1989 Comprehensive Plan*, as amended (most recent amendment, 2014).

Comments on Effects to Resources:

The project is not located in a Rural Area of Critical Economic Concern (RACEC). The proposed improvements are unlikely to attract new development and generate long-term employment. However, temporary jobs may be created during the construction phase.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:****Indirect Effects**

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Economic issue for this alternative: Federal Highway Administration

Mobility

Project Effects

Coordinator Summary Degree of Effect: **1** *Enhanced* assigned 11/21/2014 by FDOT District 4

Comments:

Through improved operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) accommodate future travel demand (thus achieving acceptable Levels of Service at the interchange); 2) allow SR-9/I-95 to continue to facilitate the north-south movement of local and regional traffic; 3) enhance access to SR-9/I-95, US 1, the Beeline Highway, and other major transportation facilities and employment centers in Southeast Florida; 4) improve freight mobility; 5) enhance emergency evacuation and response times; and 6) reduce conflict points and the potential occurrence of collisions. Therefore, a Summary DOE of Enhanced has been assigned to the Mobility issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit community opinions and preferences, targeting input from the transportation disadvantaged population, regarding the project.

Degree of Effect: **1** *Enhanced* assigned 09/11/2014 by Gaspar Jorge Padron, FDOT District 4

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

100-Foot Buffer:

FDOT RCI Bridges (1)

- 930516

Bus Transit Routes (2)

- ROUTE 20 - GARDENS MALL TO ST MARY
- ROUTE 3 - PBG TO BOCA VIA MILITARY

Transportation Disadvantaged Service Provider Areas in Florida-2010 (2)

- PALM TRAN CONNECTION
- MV CONTRACT TRANSPORTATION, INC.

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

500-Foot Buffer:

FDOT RCI Bridges (1)

- 930516

Bus Transit Routes (2)

- ROUTE 20 - GARDENS MALL TO ST MARY
- ROUTE 3 - PBG TO BOCA VIA MILITARY

Transportation Disadvantaged Service Provider Areas in Florida-2010 (2)

- PALM TRAN CONNECTION
- MV CONTRACT TRANSPORTATION, INC.

Facility Crossings (2)

- NORTHLAKE BOULEVARD
- DRAINAGE DITCH

Number of Housing Units with No Vehicle Available: 274 (5.5%)

Comments on Effects to Resources:

By improving operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) achieve acceptable Levels of Service (LOS) at the interchange in the future condition by accommodating future travel demand projected as a result of Palm Beach County population and employment growth; 2) allow SR-9/I-95 to continue to serve as a critical arterial in facilitating the north-south movement of traffic in Southeast Florida as it connects major employment centers, residential areas, and other regional destinations between Miami-Dade, Broward and Palm Beach Counties; 3) allow for more efficient access to SR-9/I-95, US 1, and the Beeline Highway from the east and west along Northlake Boulevard; and 4) enhance freight mobility by maintaining viable access to the major transportation facilities and businesses of the area (including connectors to freight activity centers/local distribution facilities or between the regional freight corridors).

Further, as both SR-9/I-95 and Northlake Boulevard serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management, the proposed project is anticipated to enhance emergency evacuation and response times by 1) improving connectivity and accessibility to SR-9/I-95 and other major arterials designated on the state evacuation route network and 2) increasing the number of residents that can be evacuated during an emergency event through expanded operational capacity.

The interchange improvement is also anticipated to provide additional through and turn lanes, as well as interchange ramp improvements, to help reduce conflict points and the potential occurrence of collisions at the interchange.

Currently, the proposed project corridor is highly congested during peak traffic periods. While potential temporary impacts to residences and businesses may occur during project construction as a result of intermittent road closures, the proposed project is anticipated to enhance overall access/mobility options and ease traffic congestion at the interchange during peak traffic periods.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Palm Beach Gardens to solicit community opinions and preferences, targeting input from the transportation disadvantaged population, regarding the project.

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Mobility issue for this alternative: Federal Highway Administration

ETAT Reviews and Coordinator Summary: Cultural

Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

Potentially protected Section 4(f) resources reported within the 200-foot project buffer include Lake Catherine Park and Lake Catherine Sports Complex. Access to these recreational features could be temporarily impeded as a result of lane closures during project construction. In addition, unrecorded cultural resources (eligible or potentially eligible for listing in the National Register of Historic Places) may exist since a comprehensive survey has not been conducted for the project area. For these reasons, a Summary DOE of Minimal has been assigned to the Section 4(f) Potential issue.

During Project Development, a Section 4(f) Determination of Applicability (DOA) will be conducted in coordination with FHWA (in

accordance with Part 2, Chapter 13 of the FDOT PD&E Manual) to determine the extent of Section 4(f) involvement and focus any required documents on the avoidance and/or minimization of impacts.

None found

The following organization(s) were expected to but did not submit a review of the Section 4(f) Potential issue for this alternative:
Federal Highway Administration

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/21/2014 by FDOT District 4

Comments:

FDOS commented that there is one recorded resource [Military Trail (8PB13795)] that intersects Northlake Boulevard; it has not been evaluated by the SHPO. FDOS also noted that since the project area has not been comprehensively surveyed, other resources of potential significance may be present. Due to the possible presence of cultural resources eligible or potentially eligible for listing in the National Register of Historic Places (NRHP) within the project area, a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue.

During Project Development, a Cultural Resource Assessment Survey will be conducted (in accordance with Part 2, Chapter 12 of the FDOT PD&E Manual) to determine the presence of historic, cultural and archeological resources in the area and evaluate their eligibility for listing in the NRHP. Any potential impacts to such resources will be avoided and/or minimized during the process.

Degree of Effect: 3 *Moderate* assigned 08/20/2014 by Ginny Leigh Jones, FL Department of State

Coordination Document: PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

As proposed in the PED, the project area should be comprehensively surveyed for cultural resources. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 12 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

Direct Effects

Identified Resources and Level of Importance:

As reported in the Preliminary Environmental Discussion (PED) there is one recorded resource - Military Trail (8PB13795) that intersects with the proposed project corridor. There are no other recorded resources in the project vicinity (within 1,320 ft).

An aerial of the project corridor from 1953 shows the presence of several home sites along present-day Northlake Boulevard and Military Trail. The project area has not been comprehensively surveyed, so it is unknown if any of these historic structures remain. By 1968 - the next available aerial - the project area has experienced significant development including the construction of Interstate 95 and several new high-density housing developments. There is a possibility that the structures in the vicinity of the project have reached 50 years of age.

Comments on Effects to Resources:

Since the Military Trail (8PB13795) is directly within the proposed project, if it determined to be significant, the impacts of the proposed project on the resource should be evaluated as part of the consultation during the PD&E Phase of the project.

Since there is a possibility that additional/new ROW will be needed for this project and there may be unrecorded historic structures adjacent to the project corridor there is a potential for direct impacts to adjacent resources. If other significant resources are identified in the project area of potential effect (APE) the impact of the proposed project on them should be evaluated as part of the PD&E process.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

This office will consult with the project sponsors to avoid, minimize, or mitigate any adverse effects to significant cultural resources.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

The neighborhoods in the immediate project vicinity (discussed in the "direct effects" section) should be evaluated for their significance.

Comments on Effects to Resources:

Regardless of the acquisition of new ROW, if any of the residential developments adjacent to the project corridor are evaluated as significant they are vulnerable to indirect effects.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

This office will consult with the project sponsors to avoid, minimize, or mitigate any adverse effects to significant cultural resources.

The following organization(s) were expected to but did not submit a review of the Historic and Archaeological Sites issue for this alternative: Federal Highway Administration, Seminole Tribe of Florida

Recreation Areas

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

While direct impacts to Lake Catherine Park and Lake Catherine Sports Complex (located north of Northlake Boulevard and west of the C-17 Canal) are not anticipated, access to these features may be temporarily affected as a result of lane closures during project construction. For this reason, a Summary DOE of Minimal has been assigned to the Recreation Areas issue.

An assessment of potential impacts to recreational features/areas will be conducted during Project Development. Future environmental documentation will include an evaluation of the direct, indirect, and cumulative impacts of the proposed project and construction on any public lands and proposed acquisition sites. Impacts will be avoided and/or minimized during the process. FDOT District Four will coordinate with the appropriate agencies concerning the necessary studies, documentation and commitments needed to adequately address any identified resources in accordance with federal, state, and local laws and regulations.

Degree of Effect: 0 *None* assigned 09/12/2014 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 *None* assigned 09/08/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 *None* assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: N/A *N/A / No Involvement* assigned 08/05/2014 by Anita Barnett, National Park Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Recreation Areas issue for this alternative:
Federal Highway Administration

ETAT Reviews and Coordinator Summary: Natural

Wetlands

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/21/2014 by FDOT District 4

Comments:

USACE stated that if work is to be performed within waters of the United States for drainage improvements, a nationwide permit

would likely be required. SFWMD also noted that an Environmental Resource Permit and potentially a Water Use Permit for dewatering would be necessary. Several man-made features (including surface waters) are located within the vicinity of the proposed interchange improvements. While the SFWMD C-17 Canal and identified stormwater ponds are not anticipated to be impacted, an unnamed drainage canal connecting to the SFWMD C-17 Canal has the potential to be affected as some of the proposed improvements cross this feature. In addition, 1.9 acres of wetlands are reported within the 500-foot project buffer. Based on the foregoing, a Summary DOE of Moderate has been assigned to Wetlands issue.

During Project Development, potential wetland impacts will be evaluated through a Wetlands Evaluation Report to be prepared in accordance with Part 2, Chapter 18 of the FDOT PD&E Manual. All necessary measures will be taken to avoid and/or minimize impacts to wetlands to the greatest extent practicable during project design. Should avoidance and/or minimization not be practicable, a Mitigation Plan will be prepared. In addition, existing compensatory mitigation sites within the area of influence will be identified and reviewed. Further, best management practices will be utilized during project construction and all applicable permits (including an Environmental Resource Permit) will be obtained in accordance with federal, state, and local laws and regulations.

Degree of Effect: 2 *Minimal* assigned 09/12/2014 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

The National Wetlands Inventory GIS report indicates that there are 1.9 acres of wetlands within the 500-ft. project buffer zone.

Comments on Effects to Resources:

If new impervious area is proposed, an environmental resource permit (ERP) would likely be required from the South Florida Water Management District for stormwater management and wetland impact minimization at the site.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 *None* assigned 09/08/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 *None* assigned 08/18/2014 by Garrett Lips, US Army Corps of Engineers

Coordination Document: Permit Required

Coordination Document Comments:

Project likely to need a nationwide permit for minor work in waters of the US for drainage improvements.

Direct Effects

Identified Resources and Level of Importance:

No wetlands appear to be present, but other waters that are waters of the United States may occur and include canals, ditches, or other waters.

Comments on Effects to Resources:

The waters are mostly low ecologically functioning aquatic resources. The project would not affect any wetlands based on the information provided. A wetland field verification should be done to ensure wetlands are not present.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: **2** *Minimal* assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Environmental Resource Permit, and potentially a Water Use permit for dewatering.

Direct Effects

Identified Resources and Level of Importance:

Surface waters, wetlands and groundwater quality are all important to the State of Florida

Comments on Effects to Resources:

Based on the description effects to wetlands/ surface waters will be minor in nature. If dewatering is necessary for the project, care will need to be taken to prevent migration of contaminated soil/water into non-contaminated areas.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: **0** *None* assigned 08/12/2014 by Brandon Howard, National Marine Fisheries Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Magnuson-Stevens Act: NMFS visited the site on August 6, 2014. Based on the project location, information provided in the ETDM website, and GIS-based analysis of impacts, NOAA's National Marine Fisheries Service (NMFS) concludes the proposed work would not directly impact areas that support essential fish habitat (EFH) or NOAA trust fishery resources. NMFS has no comments or recommendations to provide pursuant to the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 104-297); and this project will not require an EFH Assessment. Further consultation on this matter is not necessary unless future modifications are proposed and you believe that the proposed action may result in adverse impacts to EFH.

Endangered Species Act: We are not aware of any threatened or endangered species or critical habitat under the purview of NMFS that occur within the project area. However, it should be noted that a "no effect" determination must be made by the action agency and the reasoning underlying the determination should be documented in a project file. Please coordinate closely with the U.S. Fish and Wildlife Service for other species listed under the Endangered Species Act that may require consultation.

Fish and Wildlife Coordination Act: Based on the project location, information provided in the ETDM website, and GIS-based analysis of impacts, NOAA's National Marine Fisheries Service (NMFS) concludes the proposed work would not directly impact wetlands areas that support NOAA trust fishery resources. NMFS has no comments or recommendations to provide pursuant to the Fish and Wildlife Coordination Act.

CLC Recommendations:**Indirect Effects****Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

Degree of Effect: **3** *Moderate* assigned 07/29/2014 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects**Identified Resources and Level of Importance:**

Wetlands

Comments on Effects to Resources:

Wetlands provide important habitat for fish and wildlife. If wetlands are found within the project area, we recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the FDOT provide mitigation that fully compensates for the loss of important resources.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:****Indirect Effects****Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

The following organization(s) were expected to but did not submit a review of the Wetlands issue for this alternative: Federal Highway Administration

Water Quality and Quantity

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

No impaired waters are located within the project vicinity; however, the project may result in construction related disturbances as well as additional stormwater treatment and right-of-way for retention/detention ponds or swales to meet regulatory water quality criteria. SFWMD identified two existing Environmental Resource Permits (50-03527-S and 50-04686-P) that could potentially be modified to include the project improvements; the project permit must meet the criteria of Applicant's Handbook Volume II. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Water Quality and Quantity issue.

During Project Development, FDOT District Four will conduct a Water Quality Impact Evaluation (in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual) and coordinate with all relevant agencies for the design of the proposed stormwater system and the requirements for stormwater treatment, evaluating existing stormwater treatment adequacy and details on the future stormwater treatment facilities. All necessary permits will be obtained in accordance with federal, state, and local laws and regulations.

Degree of Effect: 2 *Minimal* assigned 09/12/2014 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

Stormwater runoff from the interchange surface may alter adjacent wetlands and surface waters through increased pollutant loading. Increased runoff carrying oils, greases, metals, sediment, and other pollutants from the additional impervious surface would be of concern.

Comments on Effects to Resources:

Every effort should be made to maximize the treatment of stormwater runoff from the proposed interchange improvements project to prevent ground and surface water contamination. Stormwater treatment should be designed to maintain the natural predevelopment hydroperiod and water quality, as well as to protect the natural functions of adjacent wetlands. We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. Retro-fitting of stormwater conveyance systems would help reduce impacts to water quality.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Groundwater aquifer and surface water canal

Comments on Effects to Resources:

The USEPA concurs with the potential impacts outlined in the preliminary discussion. Water quality and flow will potentially be impacted by the increased impervious surfaces, additional capacity needs for retention and construction impacts. Specifics on impacts should be developed as the specifics of the project develop in the PD&E.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: **2** *Minimal* assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Modifications of existing Environmental Resource Permits, including 50-03527-S (I-95) and 50-04686-P (Northlake Boulevard) are necessary.

Direct Effects

Identified Resources and Level of Importance:

Surface waters and flood protection

Comments on Effects to Resources:

No adverse water quality or quantity impacts are anticipated. The project must meet the criteria to obtain an Environmental Resource Permit, including the water quality and quantity criteria in Applicant's Handbook Volume II.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Water Quality and Quantity issue for this alternative: Federal Highway Administration

Floodplains

Project Effects

Coordinator Summary Degree of Effect: **0** *None* assigned 11/21/2014 by FDOT District 4

Comments:

The proposed interchange improvements will not encroach into any special flood zone hazard areas (100-year floodplain). Therefore, a Summary DOE of None has been assigned to the Floodplains issue.

Degree of Effect: **0** *None* assigned 09/08/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 None assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Floodplains issue for this alternative: Federal Highway Administration

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 2 Minimal assigned 11/21/2014 by FDOT District 4

Comments:

The interchange is within the South Florida Ecosystem Management Area, the FWS Consultation Area for the Florida scrub-jay, and the Core Foraging Area of one active nesting Wood Stork colony. While one least tern and one black skimmer were documented in the southeast quadrant of the interchange in the year 2000, no habitat for either species is present in the project area. Given the limited number of wildlife and habitat resources present and the urban nature of the area, a Summary DOE of Minimal has been assigned to the Wildlife and Habitat issue.

The final design of the project will avoid and/or minimize impacts to wetlands/wildlife and habitat to the greatest extent practicable (including confining new DRAs to previously disturbed sites), and best management practices will be utilized during project design and construction; appropriate mitigation will also be provided for unavoidable impacts. During Project Development, an Endangered Species Biological Assessment will be prepared in compliance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq) and in accordance with Part 2, Chapter 27 of the FDOT PD&E Manual. USFWS indicated that a functional assessment using the USFWS's Wood Stork Foraging Analysis Methodology is required on the foraging habitat to be impacted and the foraging habitat provided as mitigation for projects that impact 5 or more acres of wood stork foraging habitat.

Degree of Effect: 2 Minimal assigned 08/14/2014 by Scott Sanders, FL Fish and Wildlife Conservation Commission

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

No significant fish or wildlife resources were identified in the project area.

Comments on Effects to Resources:

Minimal impacts to fish or wildlife are anticipated to result from this project.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None identified.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 2 *Minimal* assigned 07/29/2014 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Federally listed species and fish and wildlife resources

Comments on Effects to Resources:

Federally-listed species -

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of Federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources. Based on review of our GIS database, the Service notes that the following Federally listed species may occur in or near the project area.

Wood Stork

The project corridor is located in the Core Foraging Areas (CFA)(within 18.6 miles) of an active nesting colony of the endangered wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

For projects that impact 5 or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our "Wood Stork Foraging Analysis Methodology" (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can be found at: <http://www.fws.gov/verobeach/ListedSpeciesBirds.html> . The Service believes that the following federally listed species have the potential to occur in or near the project site: eastern indigo snake (*Drymarchon couperi* = *Drymarchon corais couperi*), and wood stork. Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Fish and wildlife resources -

Wetlands provide important habitat for fish and wildlife. If wetlands are found within the project area, we recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the

FDOT provide mitigation that fully compensates for the loss of important resources.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Wildlife and Habitat issue for this alternative:
Federal Highway Administration

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: 0 None assigned 11/21/2014 by FDOT District 4

Comments:

As the project is located approximately three miles west of the Atlantic Ocean and Intracoastal Waterway, it is not within an area considered to have coastal or marine resources. The NMFS indicated that the proposed work would not directly impact areas that support essential fish habitat (EFH), NOAA trust fishery resources, or wetland areas that support NOAA trust fishery resources. As such, this project will not require an Essential Fish Habitat Assessment, nor is further consultation with the NMFS necessary unless future modifications to the project could result in adverse impacts to EFH. For these reasons, a Summary DOE of None has been assigned to the Coastal and Marine issue.

Degree of Effect: 0 None assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 None assigned 08/12/2014 by Brandon Howard, National Marine Fisheries Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Magnuson-Stevens Act: NMFS visited the site on August 6, 2014. Based on the project location, information provided in the ETDM website, and GIS-based analysis of impacts, NOAA's National Marine Fisheries Service (NMFS) concludes the proposed work would not directly impact areas that support essential fish habitat (EFH) or NOAA trust fishery resources. NMFS has no comments or recommendations to provide pursuant to the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 104-297); and this project will not require an EFH Assessment. Further consultation on this matter is not necessary unless future modifications are proposed and you believe that the proposed action may result in adverse impacts to EFH.

Endangered Species Act: We are not aware of any threatened or endangered species or critical habitat under the purview of NMFS that occur within the project area. However, it should be noted that a "no effect" determination must be made by the action agency and the reasoning underlying the determination should be documented in a project file. Please coordinate closely with the U.S. Fish and Wildlife Service for other species listed under the Endangered Species Act that may require consultation.

Fish and Wildlife Coordination Act: Based on the project location, information provided in the ETDM website, and GIS-based analysis of impacts, NOAA's National Marine Fisheries Service (NMFS) concludes the proposed work would not directly impact wetlands areas that support NOAA trust fishery resources. NMFS has no comments or recommendations to provide pursuant to the Fish and Wildlife Coordination Act.

CLC Recommendations:**Indirect Effects****Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

The following organization(s) were expected to but did not submit a review of the Coastal and Marine issue for this alternative: Federal Highway Administration

ETAT Reviews and Coordinator Summary: Physical**Noise****Project Effects**

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

Single family homes are located 300-500 feet north of Northlake Boulevard (east of SR-9/I-95 between Sunrise Drive and Roan Lane and between Military Trail and SR-9/I-95 to the west), and multi-family homes are located 300-500 feet south of Northlake Boulevard (along Dania Drive and Sunset Drive west of SR-9/I-95 and Lyndall Lane east of SR-9/I-95). Currently, there are sound barriers in the vicinity of the Northlake Boulevard interchange along the northbound and southbound on-ramps and the southbound off-ramp. For this reason, a Summary DOE of Minimal has been assigned to the Noise issue.

During Project Development, a Noise Study Report will be prepared in accordance with Part 2, Chapter 17 of the FDOT PD&E Manual.

None found

The following organization(s) were expected to but did not submit a review of the Noise issue for this alternative: Federal Highway Administration

Air Quality**Project Effects**

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

The project is not located within a USEPA-designated Air Quality Maintenance or Non-Attainment Area for any of the four pollutants (nitrogen oxides, ozone, carbon monoxide, and small particulate matter) specified by the USEPA in National Ambient Air Quality Standards. Therefore, the Clean Air Act conformity requirements do not apply to this project at this time. While temporary impacts to air quality could occur during project construction as a result of fugitive dust and exhaust emissions, no permanent effects to air quality are anticipated. Overall, minor air quality improvement could result due to reduced emissions from idling traffic with the expansion of operational capacity. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Air Quality issue.

During Project Development, an Air Quality Technical Memorandum will be prepared in accordance with Part 2, Chapter 16 of the FDOT PD&E Manual.

Degree of Effect: 2 *Minimal* assigned 09/11/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects**Identified Resources and Level of Importance:**

Air Quality

Comments on Effects to Resources:

Even though roadimprovement should not have a negative long-term effect on air quality, there is a potential for short term impact on air quality during construction due to construction activities as well potential added congestion due to constuction activities.

Recommended Avoidance, Minimization, and Mitigation Opportunities:**CLC Recommendations:****Indirect Effects****Identified Resources and Level of Importance:****Comments on Effects to Resources:****Recommended Avoidance, Minimization, and Mitigation Opportunities:**

The following organization(s) were expected to but did not submit a review of the Air Quality issue for this alternative: Federal Highway Administration

Contamination**Project Effects**

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 11/21/2014 by FDOT District 4

Comments:

FDEP and USEPA reported several potential contamination sites within the 500-foot project buffer including: two dry cleaning program sites, nineteen hazardous waste facilities, twenty-one petroleum contamination monitoring sites, nineteen storage tank contamination monitoring sites, nine Super Act risk sources, forty-four Super Act wells, and sixteen USEPA RCRA-regulated facilities. A Summary DOE of Substantial has been assigned to the Contamination issue due to the large number of sites within proximity to the project, the potential for subsurface contamination associated with these sites, and the potential presence of hazardous substances associated with the existing bridge over the unnamed drainage canal to the north.

Contamination (including any required permits) will be evaluated during Project Development in accordance with federal, state and local laws and regulations. A Contamination Screening Evaluation Report (similar to Phase I and Phase II Audits) will be prepared in accordance with Part 2, Chapter 22 of the FDOT PD&E Manual, including site specific surveys to assess existing known subsurface contamination and proximity to construction activities, as well as historical contamination release. Contingency Plans/"Special Provisions for Unidentified Areas of Contamination" shall be included in the project's construction contract documents. These provisions will specify procedures to follow in the event any hazardous material or suspected contamination is encountered during construction or should there be any construction-related spills.

Degree of Effect: **3** *Moderate* assigned 09/12/2014 by Lauren P. Milligan, FL Department of Environmental Protection

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

GIS data indicates that there are 19 hazardous waste facilities, 21 petroleum contamination monitoring sites, 19 storage tank contamination monitoring sites and 16 RCRA regulated facilities within the 500-ft. project buffer zone.

Comments on Effects to Resources:

A Contamination Screening Evaluation (similar to Phase I and Phase II Audits) will need to be conducted along the project right-of-way in considering the proximity to known petroleum and hazardous material handling facilities. The Contamination Screening Evaluation should outline specific procedures that would be followed by the applicant in the event drums, wastes, tanks or potentially contaminated soils are encountered during construction. Special attention should be made in the screening evaluation to historical land uses (such as solid waste disposal) that may have an affect on the proposed project, including any stormwater retention and treatment areas.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: **4** *Substantial* assigned 09/11/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Groundwater, soils, and surface water (D-Canal)

Comments on Effects to Resources:

Based on the EST data, there are several RCRA regulated sites, petroleum contamination monitoring sites, biomedical waste, dry cleaning facilities, and other facilities that can be a source of subsurface contamination. Subsurface construction activities in areas of contamination has the potential to mobilize subsurface contamination. It can also influence the characteristics of any existing plume in the aquifer. A site specific assessment is necessary to identify any existing or potential subsurface contamination. Site activities should be designed to address and manage any existing contamination without increasing risk or mobilizing contamination. Contingencies should be in place to manage contaminated media as well as hazardous waste/material that may be encountered. The effect is rated as substantial based on the large number of facilities that can be a potential source of subsurface contamination.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: **2** *Minimal* assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Environmental Resource Permit, and potentially a Water Use permit for dewatering.

Direct Effects

Identified Resources and Level of Importance:

Surface waters, wetlands and groundwater quality are all important to the State of Florida

Comments on Effects to Resources:

Based on the description effects to wetlands/ surface waters will be minor in nature. If dewatering is necessary for the project, care will need to be taken to prevent migration of contaminated soil/water into non- contaminated areas.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Contamination issue for this alternative: Federal Highway Administration

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/21/2014 by FDOT District 4

Comments:

Infrastructure-related features identified within the 500-foot project buffer include ten compliance and enforcement tracking facilities, nine limited use drinking water wells, thirty-five onsite sewage facilities, and the SFWMD C-17 Canal (located east of the existing interchange). Given the limited amount of right-of-way acquisition proposed for this project, a Summary DOE of Minimal has been assigned to the Infrastructure issue.

During Project Development, FDOT District Four will coordinate with all appropriate agencies to adequately address potential project effects on infrastructure and acquire all necessary permits.

None found

The following organization(s) were expected to but did not submit a review of the Infrastructure issue for this alternative: Federal Highway Administration

Navigation

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 11/21/2014 by FDOT District 4

Comments:

No navigable waterways are present within the project area. Therefore, a Summary DOE of N/A / No Involvement has been assigned to the Navigation issue.

Degree of Effect: N/A *N/A / No Involvement* assigned 08/18/2014 by Garrett Lips, US Army Corps of Engineers

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

No navigable waters are present

Comments on Effects to Resources:

No adverse effect on navigation is anticipated

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: N/A N/A / No Involvement assigned 07/29/2014 by Darayl Tompkins, US Coast Guard

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

No involvement.

Comments on Effects to Resources:

No involvement

Recommended Avoidance, Minimization, and Mitigation Opportunities:

No involvement

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

No Involvement

Comments on Effects to Resources:

No involvement

Recommended Avoidance, Minimization, and Mitigation Opportunities:

No involvement

The following organization(s) were expected to but did not submit a review of the Navigation issue for this alternative: Federal Highway Administration

ETAT Reviews and Coordinator Summary: Special Designations

Special Designations

Project Effects

Coordinator Summary Degree of Effect: 0 None assigned 11/21/2014 by FDOT District 4

Comments:

There are no Outstanding Florida Waters, aquatic preserves, scenic highways/byways, or wild or scenic rivers reported within the project vicinity. Therefore, no impacts to these resources are anticipated and a Summary DOE of None has been assigned to the Special Designations issue.

Degree of Effect: 0 None assigned 09/08/2014 by Maher Budeir, US Environmental Protection Agency

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Degree of Effect: 0 None assigned 08/18/2014 by Mindy Parrott, South Florida Water Management District

Coordination Document: Permit Required

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The following organization(s) were expected to but did not submit a review of the Special Designations issue for this alternative: FL Department of Agriculture and Consumer Services, Federal Highway Administration

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Recommendations

Date	Description
11/21/2014	<p>FDOT commits to the following technical studies: 1. Air Quality Technical Memorandum, 2. Conceptual Stage Relocation Plan, 3. Contamination Screening Evaluation Report, 4. Cultural Resource Assessment Survey, 5. Endangered Species Biological Assessment, 6. Noise Study Report, 7. Public Hearing Transcript, 8. Public Involvement Plan, 9. Section 4(f) Determination of Applicability, 10. Sociocultural Effects Evaluation, 11. Water Quality Impact Evaluation, and 12. Wetland Evaluation Report.</p> <p>FDOT commits to the following permits: SFWMD Environmental Resource Permit, SFWMD Water Use Permit (potentially), and USACE Nationwide Permit.</p> <p>During Project Development, FDOT District Four will coordinate with the City of Palm Beach Gardens and the Palm Beach Metropolitan Planning Organization (MPO) to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Palm Beach Gardens Comprehensive Plan and is consistent with the adopted Palm Beach MPO Long Range Transportation Plan (LRTP) and 2) funding is identified for all future project phases in the Transportation Improvement Program (TIP), LRTP, State Transportation Improvement Program (STIP), and FDOT Strategic Intermodal System (SIS) Cost Feasible Plan.</p> <p>During Project Development, public outreach will require Limited English Proficiency (LEP) accommodations.</p>

Anticipated Permits

Permit	Type	Conditions	Assigned By	Date
Department of the Army Corps of Engineers Nationwide Permit	USACE		FDOT District 4	11/21/14
SFWMD Environmental Resource Permit	Water		FDOT District 4	11/21/14
SFWMD Water Use Permit	Water	(potentially)	FDOT District 4	11/21/14

Anticipated Technical Studies

Technical Study Name	Type	Conditions	Assigned By	Date
Noise Study Report	ENVIRONMENTAL		FDOT District 4	11/21/2014
Contamination Screening Evaluation Report	ENVIRONMENTAL		FDOT District 4	11/21/2014
Conceptual Stage Relocation Plan	ENVIRONMENTAL		FDOT District 4	11/21/2014
Endangered Species Biological Assessment	ENVIRONMENTAL		FDOT District 4	11/21/2014
Wetlands Evaluation Report	ENVIRONMENTAL		FDOT District 4	11/21/2014
Sociocultural Effects Evaluation	Other		FDOT District 4	11/21/2014
Air Quality Technical Memorandum	ENVIRONMENTAL		FDOT District 4	11/21/2014
Water Quality Impact Evaluation (WQIE)	ENVIRONMENTAL		FDOT District 4	11/21/2014
Cultural Resource Assessment Survey	ENVIRONMENTAL		FDOT District 4	11/21/2014
Public Involvement Plan	Other		FDOT District 4	11/21/2014
Public Hearing Transcript	Other		FDOT District 4	11/21/2014
Section 4(f) Determination of Applicability	ENVIRONMENTAL		FDOT District 4	11/21/2014

Class of Action

Class of Action Determination

Class of Action	Other Actions	Lead Agency	Cooperating Agencies	Participating Agencies
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Type 2 Categorical
Exclusion

Section 4(f) Evaluation
Endangered Species
Assessment Consultation

Federal Highway
Administration

No Cooperating Agencies
have been identified for
this project in the EST.

No Participating Agencies
have been identified for
this project in the EST.

Class of Action Signatures

Name	Agency	Review Status	Date	ETDM Role
Richard Young	FDOT District 4	ACCEPTED	04/02/2015	FDOT ETDM Coordinator
Luis D Lopez, P.E.	Federal Highway Administration	ACCEPTED	05/20/2015	Lead Agency ETAT Member

Dispute Resolution Activity Log

There are no dispute actions identified for this project in the EST.

Appendices

Preliminary Environmental Discussion Comments

Social and Economic

Land Use Changes

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

The intersection falls within the City of Palm Beach Gardens and Unincorporated Palm Beach County. The areas around the interchange are developed. According to the Palm Beach County and City of Palm Beach Gardens Zoning District Maps, the area northeast of the project is zoned residential low density (RL2, RL3), mixed use (MXD), general commercial (CG1), and public or institutional (P/I); southeast is zoned general commercial (CG1), residential medium density (RM), professional office (PO), and industrial. The area northwest of the project is zoned residential low density (RL3), general commercial (CG1), and intensive commercial (CG2). The area southwest of the interchange is zoned general commercial (CG), residential medium density (RM), and residential low density (RL3).

According to the Future Land Use Maps for Palm Beach County and the City of Palm Beach Gardens, the area east of SR-9/I-95 consists of high and medium density residential, commercial, mixed use, recreation open space, and public land uses, while the west side consists of commercial, medium and low density residential land uses. Since the development patterns are already established around the interchange, the minimal right-of-way acquisition that is required for the proposed improvements is not anticipated to result in land use changes.

Social

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

There are two parks (Lake Catherine Park and Lake Catherine Sports Complex) within 2,000 feet of the proposed Northlake Boulevard improvements and a place of worship (Covenant Centre International) adjacent to the SR-9/I-95 northbound on-ramp. The recommended conceptual design alternative (CDA) proposes to construct a stormwater pond on an undeveloped parcel partially owned by Covenant Centre International.

The area falls within three U.S. Census tracts (9.02, 9.03 and 10.04) that are predominantly (60%) comprised of white households, with the remaining households being Hispanic (11-17%), Black or African American (6-18%), or other ethnicity (2-5%). The households in

Census tracts 9.02, 9.03, and 10.04 have median household incomes of \$72,379, \$42,457 and \$42,304, respectively (U.S. Census Bureau Table P9 and S1901). Thus, the areas are not considered minority or low income communities.

While access to residences and businesses could temporarily be affected and/or modified, overall impacts on the social environment and community cohesion are anticipated to be minimal. A Sociocultural Effects Evaluation will be conducted to better determine potential community effects.

Relocation Potential

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Moderate

Comments:

The proposed improvements at SR-9/I-95 and Northlake Boulevard will require additional right-of-way along the northern and southern portions of Northlake Boulevard, both east and west of the existing SR-9/I-95 intersection. Based on the conceptual design alternative (CDA), Northlake Boulevard will be widened to accommodate both eastbound and westbound through lanes, turning lanes, bike lanes, sidewalks, and curb and gutter. These improvements, including the addition of a dedicated right-turn and shared through/right lane at the northwest corner of the Sunrise Drive and Northlake Boulevard intersection and the southern shift of the SR-9/I-95 southbound on-ramp to accommodate the additional eastbound through lane will result in acquisition of new right-of-way. These improvements have the potential to impact approximately 19 commercial businesses located west of the interchange between Military Trail and SR-9/I-95 and approximately ten commercial businesses east of the interchange between MacArthur Blvd and SR-9/I-95. No residences have the potential to be impacted. Of these businesses, a gas station located at the northeast corner of the Military Trail/Northlake Boulevard intersection and a McDonald's restaurant located at the northwest corner of the Sunrise Drive/Northlake Boulevard intersection are the only businesses likely to require relocation.

Further, access to businesses could temporarily be affected and/or modified. For these reasons, moderate involvement regarding relocation potential is anticipated. A Conceptual Stage Relocation Plan will be prepared if relocations are determined to be necessary.

Farmlands

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: None

Comments:

No farmlands are reported within the 200-foot project buffer. According to the Future Land Use Maps of Palm Beach County and the City of Palm Beach Gardens, the project area is anticipated

to continue supporting residential, commercial, and recreational uses throughout the area. For these reasons, no impacts to farmlands are anticipated as a result of the project.

Aesthetic Effects

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Community features associated with aesthetics within the 200-foot project buffer include two parks (Lake Catherine Park and Lake Catherine Sports Complex), both of which are on the north side of Northlake Boulevard, west of the C-17 Canal. The proposed project alignment would have minimal visual impacts on the surrounding communities due to widening of the existing road.

Economic

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Northlake Boulevard is a major east-west corridor in northern Palm Beach County. It provides access to numerous businesses along the project corridor and also serves as a major access point to SR-9/I-95. The proposed project may cause temporary access issues to existing businesses in the area. However, the overall project will increase the corridor capacity and more efficiently enable people to access SR-9/I-95 and improve access to the businesses along Northlake Boulevard. Overall, economic effects as a result of the project are anticipated to be minimal.

Mobility

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Enhanced

Comments:

Northlake Boulevard is a major east-west corridor in northern Palm Beach County and provides access to US 1 at the eastern extent as well as SR-9/I-95 and the Beeline Highway. Currently, the proposed project corridor is highly congested during peak traffic periods. While intermittent road closures may be necessary during project construction, the overall improvement is anticipated to enhance access/mobility options throughout northern Palm Beach County.

Cultural

Section 4(f) Potential

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Potentially protected Section 4(f) resources reported within the 200-foot project buffer include Lake Catherine Park and Lake Catherine Sports Complex, both of which are located north of Northlake Boulevard, just west of the SFWMD C-17 Canal. Neither of these parks will be impacted by the proposed project. However, temporary impacts to access may occur during construction.

Historic and Archaeological Sites

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Based on review of available information and a site reconnaissance conducted on January 9, 2014, there is one State Historic Preservation Officer (SHPO) Resource Group [Military Trail (PB13795)] within 300 feet of the proposed Northlake Boulevard improvements. Military Trail has not been evaluated by SHPO. No impacts are proposed to this resource group. Minimal involvement regarding historic and archaeological sites is anticipated due to the potential presence of unidentified resources along the project segment since a comprehensive Cultural Resources Assessment Survey (CRAS) has not been conducted. A CRAS will be performed to determine potential impacts to the above-identified resources and the presence of any NRHP-eligible unrecorded cultural features.

Recreation Areas

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Recreation areas/features that are present within the 200-foot project buffer include Lake Catherine Park and Lake Catherine Sports Complex, both located north of Northlake Boulevard and west of the SFWMD C-17 Canal. No permanent impacts are proposed to either of these parks. However, minor impacts to access during construction may occur due to temporary lane closures.

Natural

Wetlands

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Moderate

Comments:

Although there are no naturally occurring wetlands within the project area, there are several man-made features (including surface waters) within the vicinity of the proposed improvements at the SR-9/I-95 and Northlake Boulevard interchange. The project area crosses an unnamed drainage canal located approximately 3,000 feet north of Northlake Boulevard that runs perpendicular to SR-9/I-95 and connects to Lake Catherine and eventually the SFWMD C-17 Canal to the east of the interchange. Also, there are two stormwater retention ponds and one dry detention pond adjacent to the project corridor. One retention pond lies north of Northlake Boulevard within a commercial development that is approximately 0.25 miles east of Military Trail and the other retention pond is adjacent (east) to the SR-9/I-95 northbound off-ramp. The dry detention pond is along the eastbound lane of Northlake Boulevard approximately 300 feet east of Military Trail. The C-17 Canal and stormwater ponds near the proposed improvements will not be impacted. However, the unnamed canal connecting to the SFWMD C-17 Canal has the potential to be impacted by the proposed improvements, which include widening of the SR-9/I-95 northbound on-ramp, as well as construction of an adjacent retaining wall. Both of these improvements cross the canal. Based on the recommended conceptual design alternative (CDA), moderate impacts to the aforementioned surface waters are anticipated.

Water Quality and Quantity

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

No Impaired Waters are located within the project vicinity. Minimal involvement regarding water quality and quantity is anticipated for the following reasons: 1) additional stormwater treatment for additional impervious area, 2) potential need for additional right-of-way to provide for the creation of retention/detention ponds or swales to meet regulatory stormwater treatment and water quality criteria, and 3) potential impacts from construction related disturbances. The project will be designed to meet state water quality and quantity standards, and best management practices will be utilized during construction. A Water Quality Impact Evaluation will be conducted to determine potential impacts to water quality and quantity.

Floodplains

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: None

Comments:

According to the Federal Emergency Management Agency Flood Insurance Rate Map panels 1202210002B (01/03/1979), 1202210004B (01/03/1979), 1201920130B (10/15/1982), and 1202210003C (01/06/1988), the interchange is located within Flood Zone B. Flood Zone B represents areas between the limits of the 100-year and 500-year floodplain. Proposed improvements will not encroach into any special flood hazard areas (100-year flood plain) areas, thus potential impacts to the 100-year floodplain will not occur.

Wildlife and Habitat**Project Level****Comments:**

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

The interchange is within USFWS Consultation Areas for the Florida scrub-jay (*Aphelocoma coerulescens*) and within the USFWS core foraging area (CFA) of one wood stork (*Mycteria americana*) colony: 619220 PBC SWA. Also, one least tern (*Sternula antillarum*) and one black skimmer (*Rynchops niger*) were documented in the southeast quadrant of the interchange in the year 2000. However, there is no habitat for either species in the project area. Least terns are known to nest on tar and gravel roofs and on spoil piles left exposed during construction, either of which may be the case for this species. Impacts to these species from the improvements are not anticipated. Portions of the SFWMD C-17 Canal and Lake Catherine have been designated by the USFWS as critical habitat for the West Indian Manatee. However, the proposed improvements do not impact the C-17 Canal or Lake Catherine and, according to the Comprehensive Everglades Restoration Plan (CERP) Manatee Canal Access Map for West Palm Beach and the CERP West Palm Beach Structure Accessibility list, these water bodies are not accessible to manatees due to SFWMD weir structure S44 to the east. No impacts to listed species or their habitats are anticipated. Therefore, minimal involvement regarding wildlife and habitat resources is anticipated.

Coastal and Marine**Project Level****Comments:**

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: N/A / No Involvement

Comments:

The project is not located in an area considered to have coastal or marine resources. The project is located approximately three miles west of the Atlantic Ocean and Intracoastal Waterway. Therefore, no involvement regarding these resources is anticipated.

Physical

Noise

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Moderate

Comments:

Based on review of available information and a site reconnaissance conducted on January 9, 2014, there are currently noise sensitive receptors within 500 feet of the interchange improvements, which consist of the Covenant Centre International Church (adjacent to interchange improvements), single family homes 300-500 feet north of Northlake Boulevard (east of SR-9/I-95 between Sunrise Drive and Roan Lane and between Military Trail and SR-9/I-95 to the west), and multifamily homes 300-500 feet south of Northlake Boulevard (along Dania Drive and Sunset Drive west of SR-9/I-95 and Lyndall Lane east of SR-9/I-95). Currently, there are sound barriers in the vicinity of the Northlake Boulevard interchange along the northbound and southbound on-ramps and the southbound off-ramp. However, the northbound on-ramp barrier begins immediately north of the Covenant Centre International Church. Although minimal noise impacts are expected as a result of the proposed project, increased noise levels during construction could have short-term impacts on nearby businesses. Overall, noise and vibration related impacts as a result of the project are anticipated to be moderate. A Noise Study Report will be prepared to determine potential noise effects.

Air Quality

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

The project is not located within a USEPA-designated Air Quality Maintenance or Non-Attainment Area for any of the four pollutants -nitrogen oxides, ozone, carbon monoxide, and small particulate matter- specified by the USEPA in National Ambient Air Quality Standards. Therefore, the Clean Air Act conformity requirements do not apply to this project at this time. While temporary impacts to air quality could occur during the construction of the proposed project, no permanent effects to air quality are anticipated. Overall, minor air quality improvement could result from less congestion and less time spent idling in traffic. An Air Quality Technical Memorandum will be conducted to determine potential effects to air quality.

Contamination

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Moderate

Comments:

Based on a review of the Florida Department of Environmental Protection (FDEP) GIS data, the FDEP contamination locator map, FDEP OCULUS database, and limited site reconnaissance conducted on January 9, 2014, several potential hazardous material sites were identified within the vicinity of the SR-9/I-95 and Northlake Boulevard Interchange.

There are 29 potential storage tank contamination monitoring (STCM) sites, three dry cleaning solvents cleanup sites, one open waste cleanup (responsible party) site, and four small quantity generators, documented by the FDEP Division of Waste Management, and 170 State Underground Environmental Response Act (SUPER Act) monitoring and risk sites documented by the Florida Department of Health within 0.25 miles of the proposed improvements at the SR-9/I-95 and Northlake Boulevard interchange. The recommended conceptual design alternative (CDA) proposes impacts to 29 commercial businesses, of which four (4) are gas stations. These gas stations are located at the northeast corner of the Military Trail/Northlake Boulevard intersection, the northwest corner of the Keating Drive/Northlake Boulevard intersection, immediately west of the SR-9/I-95 southbound off-ramp, and immediately east of the SR-9/I-95 northbound on-ramp, respectively. Based on the FDEP contamination locator map and associated OCULUS database files, the four gas stations have documented discharges within the STCM program that have ongoing cleanup activities. Additional file review or field reconnaissance would be required to determine the potential and severity of hazardous material and contamination impacts.

Further, there may be hazardous substances (e.g., asbestos, lead-based paint, etc.) associated with the existing bridge. Although there are numerous contamination issues that need to be addressed within the project area, through avoidance and remediation measures these issues can be reduced. A Contamination Screening Evaluation Report will be prepared to determine potential contamination effects.

Infrastructure

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: Minimal

Comments:

Aside from existing roadway infrastructure, the SFWMD C-17 Canal is present just outside of the project corridor to the east and as such, will not be impacted by the proposed project. Based on the minimal amount of right-of-way acquisition proposed for this project, minimal effects to infrastructure are anticipated.

Navigation

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: None

Comments:

The proposed project will not impact the navigation of any canal or surface water as proposed. The SFWMD C-17 Canal is located outside of the project corridor to the east. No canals or waterways are present within or adjacent to the proposed project area. Therefore, no impacts to navigation are anticipated.

Special Designations

Special Designations: Outstanding Florida Waters

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: N/A / No Involvement

Comments:

No Outstanding Florida Waters are present within or adjacent to the proposed project area. Therefore, no involvement regarding these specially designated resources is anticipated.

Special Designations: Aquatic Preserves

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: N/A / No Involvement

Comments:

No Aquatic Preserves are present within or adjacent to the proposed project area. Therefore, no involvement regarding these specially designated resources is anticipated.

Special Designations: Scenic Highways

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: N/A / No Involvement

Comments:

No scenic highways are present within or adjacent to the proposed project area. Therefore, no involvement regarding these specially designated resources is anticipated.

Special Designations: Wild and Scenic Rivers

Project Level

Comments:

Refer to Alternative PED Comments.

Alternative Level

Alternatives: #1

Degree of Effect: N/A / No Involvement

Comments:

There are no wild or scenic rivers reported within the project vicinity. Therefore, no involvement regarding these specially designated resources is anticipated.

Advance Notification Comments

Federal Highway Administration Comment --

Purpose and Need:

- It is stated that the PD&E for the project is programmed in the Palm Beach MPO's Transportation Improvement Program (2015-2020) but not in the current LRTP. All projects within an MPO boundary that are included in the MPO's TIP must come from the MPO's LRTP.
- When will the PD&E work begin on the project? The MPO is in the process of adopting their 2040 LRP Update. This project should be included in that updated Plan and as noted in the narrative, in the upcoming STIP.
- Reference is made in several sections (Consistency with Transportation Plans and Objectives and the Planning Consistency Status sections) that the project will be included in the 2035 LRTP. Will it be the 2035 LRTP or the 2040 LRTP?
- Since this project is in the programming screen vs the planning screen why are there not any public comments available in this ETAT Tool? This project, according to the narrative, is included in the MPO TIP for 2015. The TIP required public involvement and MPO discussion. Please include any feedback and input from these processes regarding this project. How does the public view this project? Has there been any controversy or negative public input on the need for this project or for the project impacts?
- Please include the estimate cost of this project. The narrative states that \$1million is programmed for the PD&E study in the FDOT Work Program and the MPO's TIP. Is the \$10.3 million for the Ultimate Interchange Improvements stated in the Description the cost for this project for all phases? Will federal funding be sought for any phases in this project? Please clearly identify what the project costs and phases are anticipated to be for the entire project as well as any programmed funds and project phasing in such a manner that is very clear to the public. This disclosure of information is an important element the public uses during their consideration of the project.
- Under the growth management section of the project description provided projected growth percentages for population and employment. But the years cited are 2005-2035. Please provide more updated information and data.

Socio Cultural Impacts:

- The proposed project is within 100 and 500 feet of several social service and health care and religious facilities. A specific plan for outreach efforts for both the facilities and the individual facility clients will need to be developed.
- What outreach efforts are planned or have been made to the minority and low income populations along this project? The 500-foot project buffer contains a minority population greater than 40%. A total of 3,030 individuals comprise the minority population of these census blocks. Information also shows that there is a population within this buffer with Limited English Proficiency (LEP) accommodations will be required during the Project.

Mobility/Freight

- Business and commercial - what mitigation coordination has taken place with the commercial businesses within the project area of impact for either continued access to their businesses or any taking/relocation of property for the project? What operational improvements are being considered as part of or independent of this project to assist with access to/from the existing businesses?
- Truck traffic - is this a corridor used for freight? Please include truck and commercial vehicle traffic and data. What is the anticipated growth of the freight volume over the next 20 years especially considering the developments and economic centers planned along this corridor? Have any outreach efforts been made to the freight providers for their input for operational improvements?

Transit:

- The narrative does not identify if there are any operating transit routes or stops within the study area, but the ETAT tool clearly identifies transit routes existing. Coordination with the transit providers will be required throughout the project to minimize impacts service. Are there any transit stops that will be directly impacted by this project?

Bicycle/Pedestrian Facilities:

- The narrative states that there currently are no designated bicycle lanes in the project study area. It was not clear if bicycle facilities will be included in the project. Are the sidewalks currently used to access the businesses and residences within the project study area? If so, how will this access be maintained?

Section 4(f) Resources:

Two resources have been identified and coordination should be made to mitigate the impact on the access to both resources during the construction phase.

--Luis D Lopez, P.E., 9/12/2014

No response

GIS Analyses

Since there are so many GIS Analyses available for Project #14182 - SR-9/I-95 at Northlake Boulevard Interchange, they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

<http://etdmpub.fl.a-etat.org/est/index.jsp?tpID=14182&startPageName=GIS%20Analysis%20Results>

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Programming Screen Summary Report Re-published on 05/27/2015 by Shandra Davis-Sanders Milestone** is selected. GIS Analyses snapshots have been taken for Project #14182 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

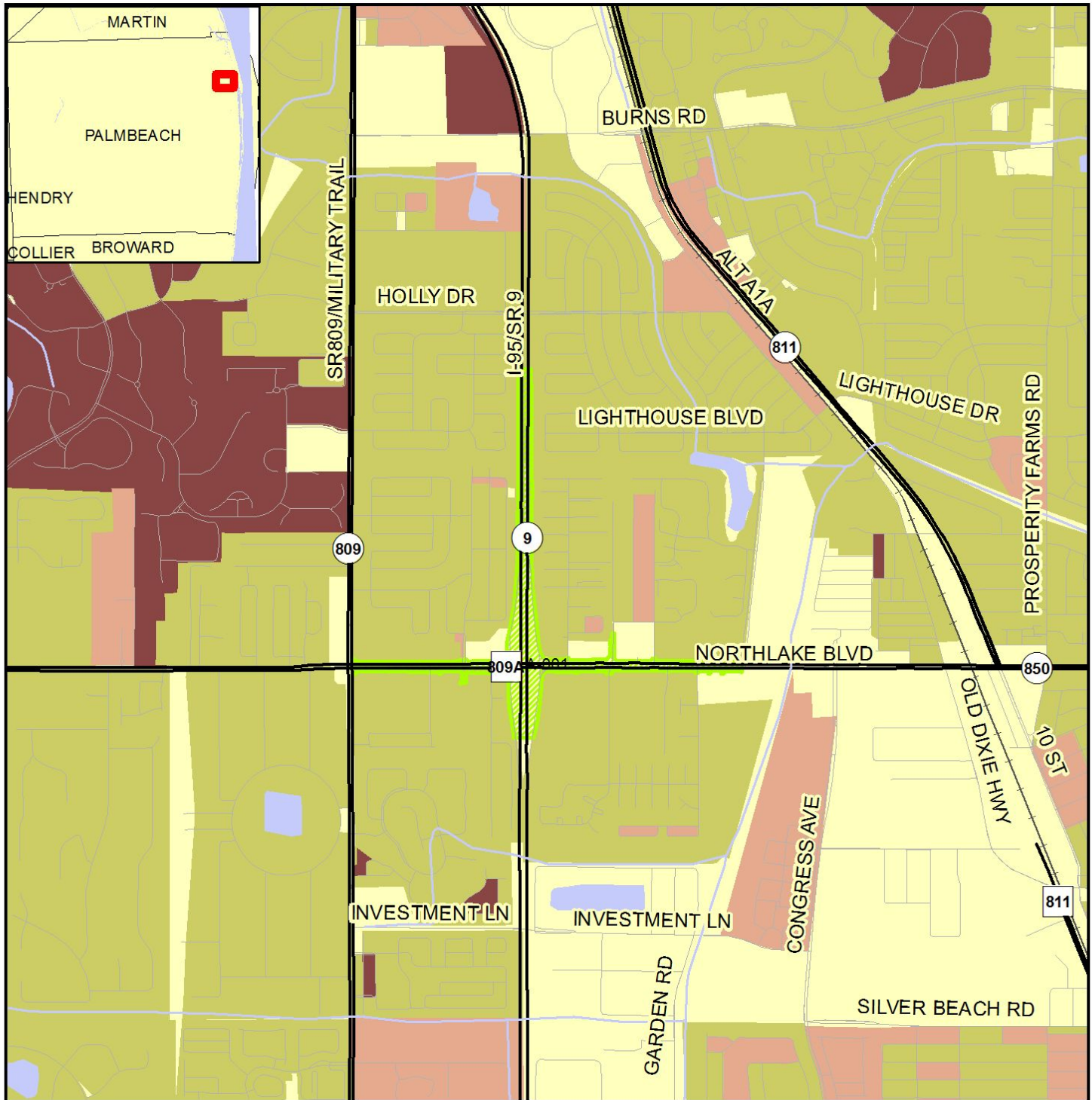
There are no attachments for this project.

Degree of Effect Legend

Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.	
0	None (after 12/5/2005)	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
2	Minimal to None (assigned prior to 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Potential Dispute (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Dispute Resolution (Programming Screen)	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

Project-Level Hardcopy Maps

14182 SR-9/I-95 at Northlake Boulevard Interchange



0 1 Miles

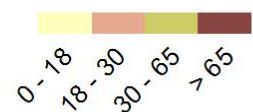
Population Age Distribution Map



Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- Water Body

Median Age



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etdm

Efficient Transportation Decision Making

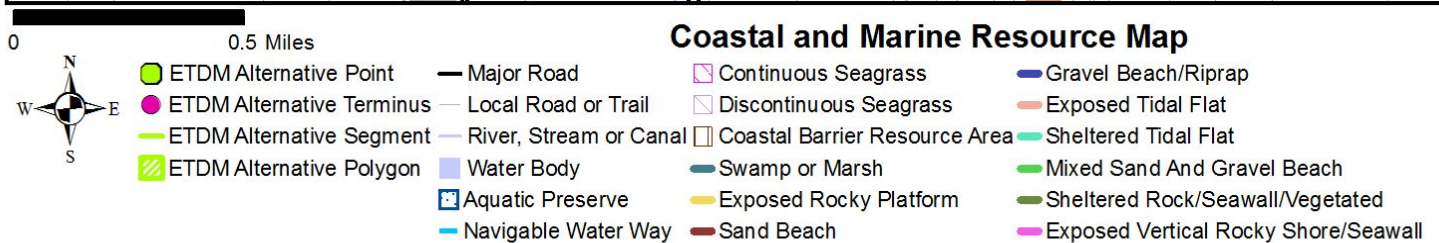
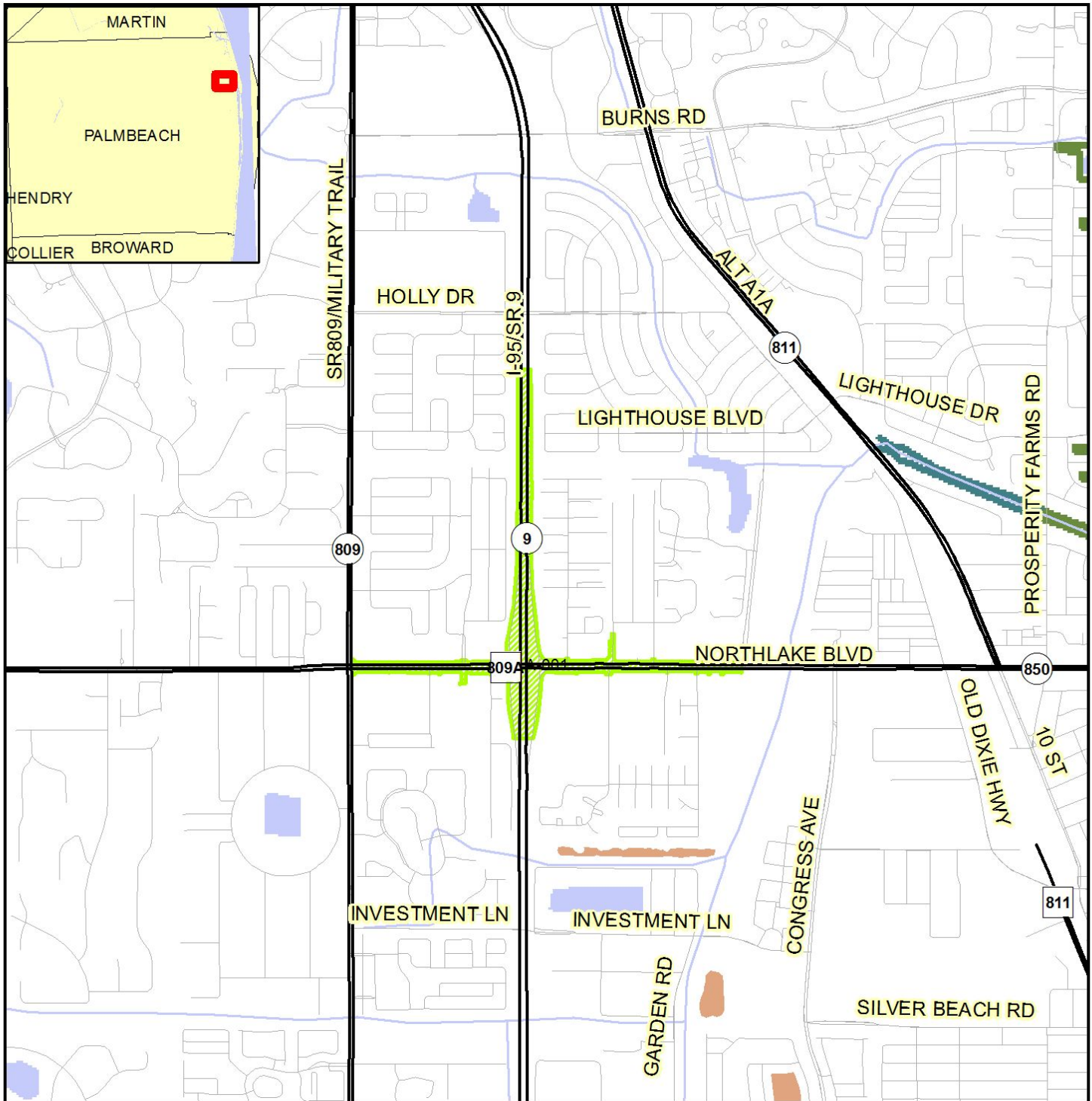
est

Environmental Screening Tool

Map Generated on: 7/28/2014

FDOT

14182 SR-9/I-95 at Northlake Boulevard Interchange



Data Sources: NAVTEQ; US Geological Survey; Florida Marine Research Institute; Florida Department of Transportation; Florida Department of Environmental Protection; National Oceanic and Atmospheric Association; Florida Water Management Districts

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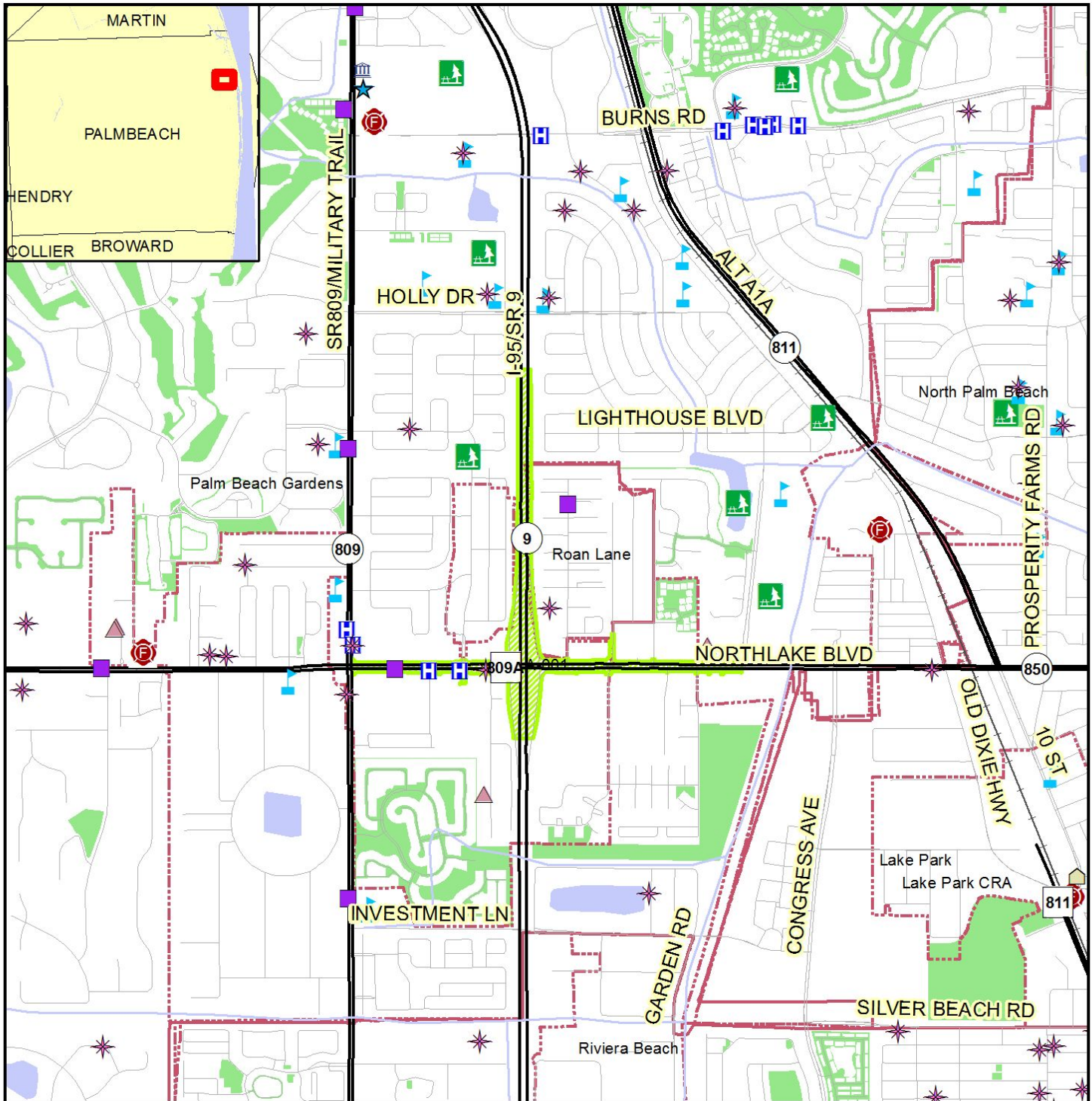
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Efficient Transportation Decision Making

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Environmental Screening Tool

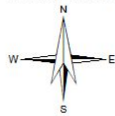
Map Generated on: 7/28/2014

FDOT
Florida Department of Transportation

14182 SR-9/I-95 at Northlake Boulevard Interchange



0 0.07 Miles



- | | | | |
|--|---|--|---|
| <ul style="list-style-type: none"> ETDM Alternative Point ETDM Alternative Terminus ETDM Alternative Segment ETDM Alternative Polygon Major Road Local Road or Trail | <ul style="list-style-type: none"> Government Civic Center Cemetery Social Service Community Center Law Enforcement Place of Worship | <ul style="list-style-type: none"> Cultural Center Fire Station Health Care School Park | <ul style="list-style-type: none"> River, Stream or Canal Recreational Trail Railroad Community Boundary Water Body Conservation or Recreation Area |
|--|---|--|---|

Data Sources:

US Geological Survey; FL Department of Transportation; NAVTEQ; FL Property Appraisers; FL Natural Areas Inventory

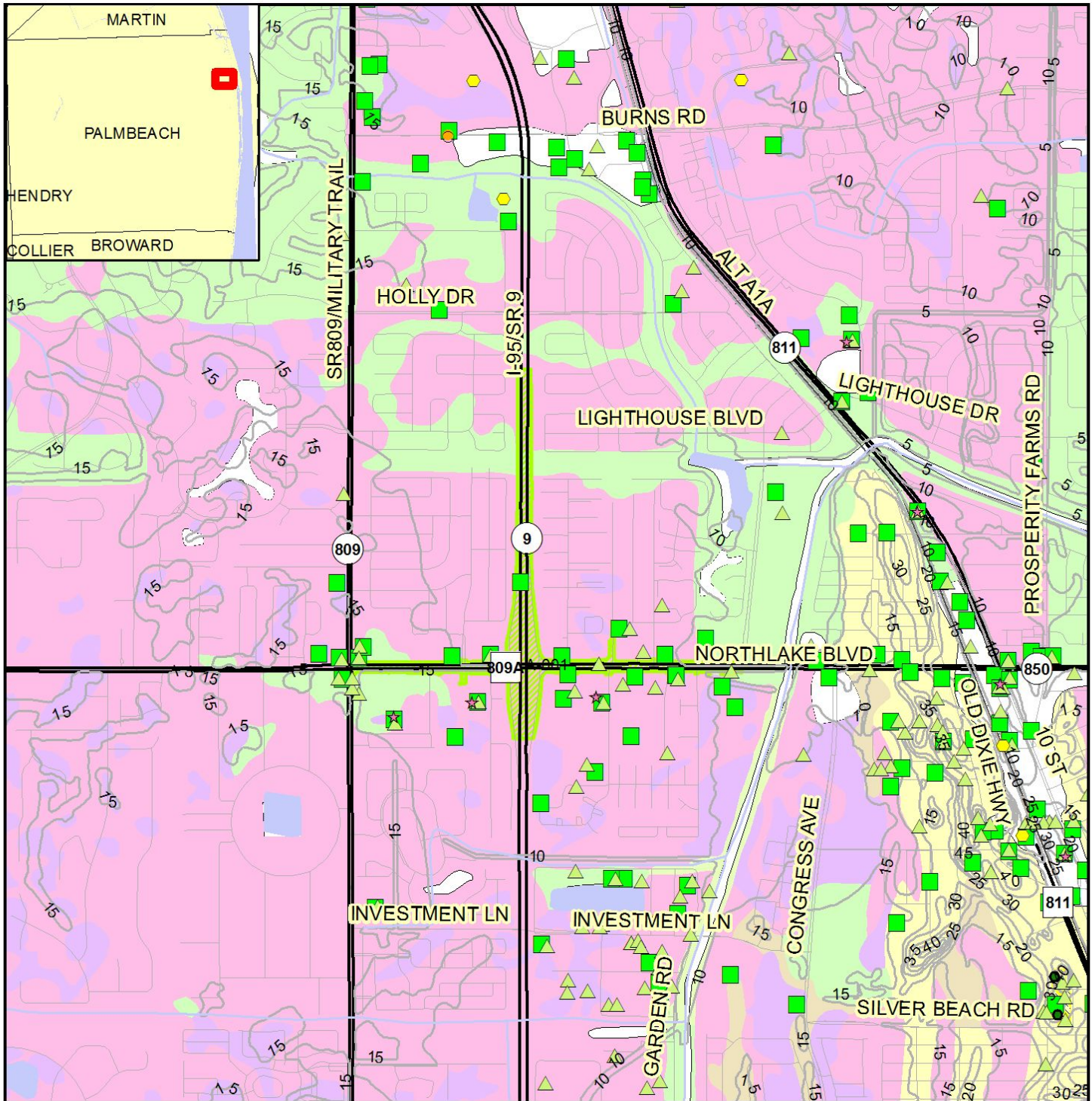
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est
Environmental Screening Tool

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14182 SR-9/I-95 at Northlake Boulevard Interchange



Potential Contamination Assessment Map

- 0 0.5 Miles
- ETDM Alternative Point
 ETDM Alternative Terminus
 ETDM Alternative Segment
 ETDM Alternative Polygon
 Major Road
 Local Road or Trail
 Railroad
 River, Stream or Canal
 Toxic Release Inventory
 Dry Cleaning Facility
 Solid Waste Facility
 NPL Remediation Site
 Hazardous Material Site
 Power Plant
 Superfund Site
 Nuclear Site
 FDEP Tanks
 Brownfield Area
 5 FT Contour
 Water Body
 Swamp/Marsh
 Soil Drainage
 Excessively Drained
 Somewhat Excessively Drained
 Moderately Well Drained
 Well Drained
 Somewhat Poorly Drained
 Poorly Drained
 Very Poorly Drained
 Unclassified

Data Sources:

NAVTEQ; US Geological Survey; FL Department of Transportation; FL Department of Environmental Protection; FL Water Management Districts; US Environmental Protection Agency; Natural Resource Conservation Service
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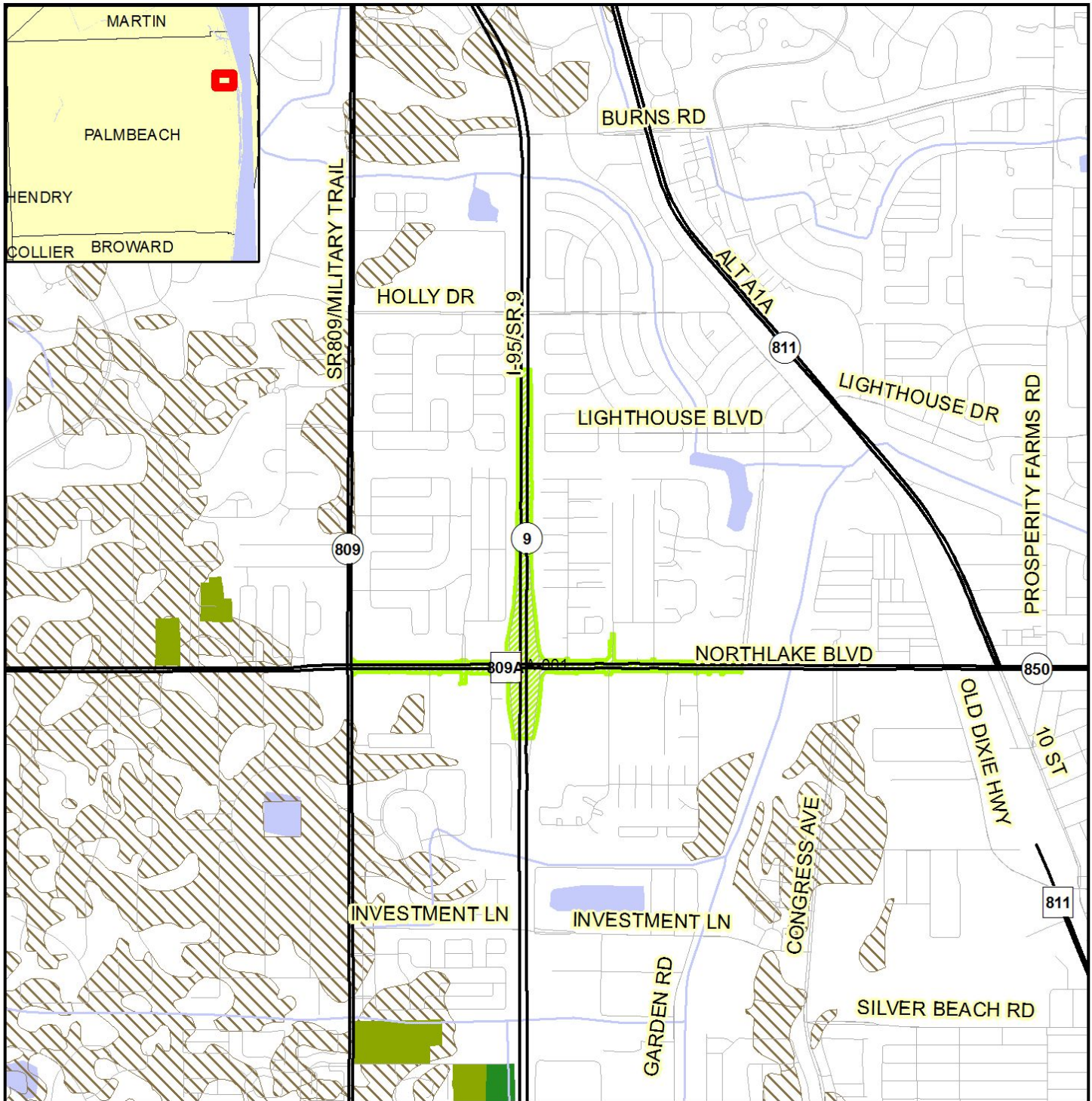
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Farmlands Resource Map



- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- River, Stream or Canal
- Water Body
- Nurseries/Vineyards
- Specialty Farms
- Tree Crops
- Cropland/Pastureland
- Prime Farmland Soils
- Rural Open Lands

Data Sources: NAVTEQ, Florida Water Management Districts, US Geological Survey, Natural Resources Conservation Services

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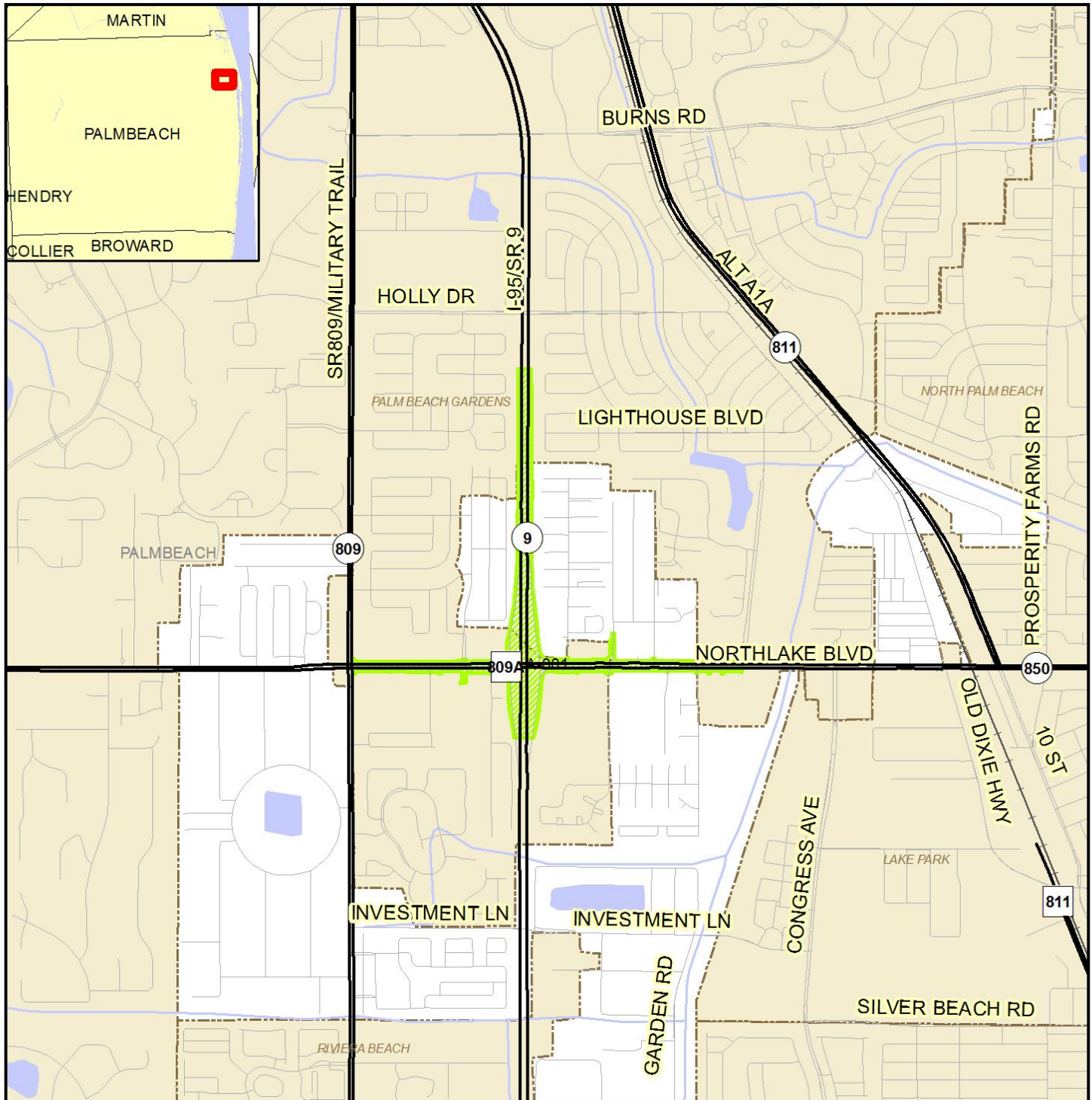
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Floodplain Resource Map

0 0.4 Miles



Data Sources:
NAVTEQ
US Geological Survey
Federal Emergency Management Agency

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- Water Body
- City Limits
- County Boundaries
- Special Flood Hazard Area

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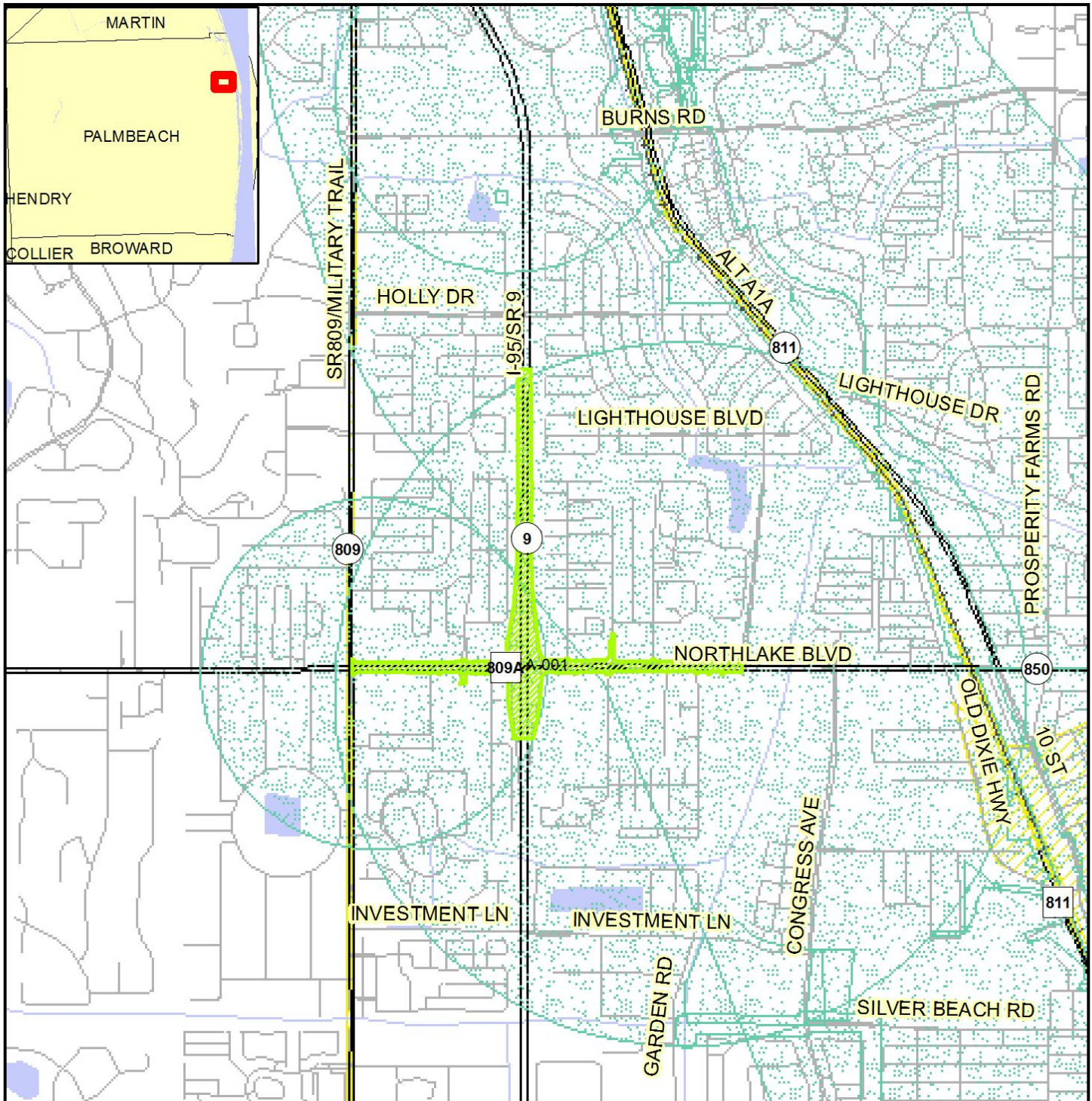
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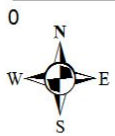
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Historic Resources Map



Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of State,
 Bureau of Archaeological Research

- | | | |
|---------------------------|------------------------|-------------------------------------|
| ETDM Alternative Point | River, Stream or Canal | Historic Bridge |
| ETDM Alternative Terminus | Water Body | Historic Resource Group |
| ETDM Alternative Segment | Swamp/Marsh | Cultural Resource Field Survey Area |
| ETDM Alternative Polygon | Railroad | State Historic Highway |
| Major Road | Historic Structure | |
| Local Road or Trail | Historic Cemetery | |

Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

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Hydrogeology Resource Map

0 0.4 Miles



- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- River, Stream or Canal
- Water Body
- Swamp/Marsh

- ### Recharge Areas of the Floridan Aquifer
- Discharge 1 TO 5
 - Discharge > 5
 - Discharge < 1
 - Recharge 1 TO 10
 - Recharge > 10
 - Recharge < 1

- ### Geological Epoch
- Eocene
 - Holocene
 - Miocene
 - Miocene/Pliocene
 - Oligocene
 - Oligocene/Miocene
 - Pleistocene
 - Pleistocene & Holocene
 - Pliocene
 - Pliocene/Pleistocene

Data Sources: NAVTEQ; US Geological Survey; Florida Department of Transportation; South West Florida Water Management District; Florida Geological Survey

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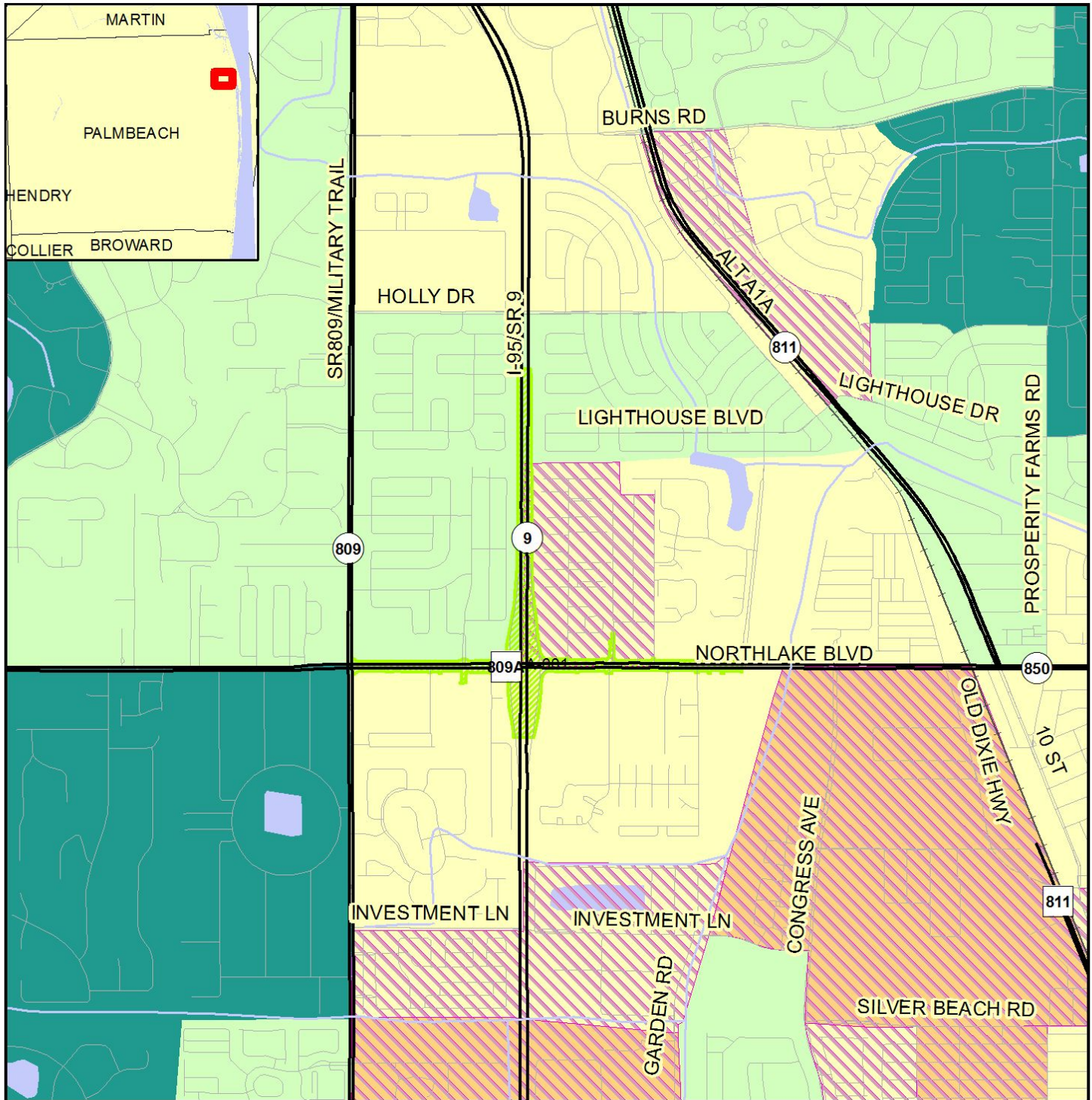
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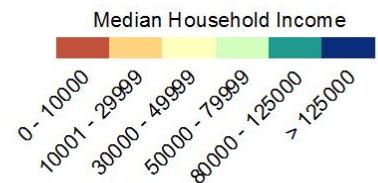
0 0.6 Miles

Income Distribution Map



Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- > 20% Below Poverty
- Water Body



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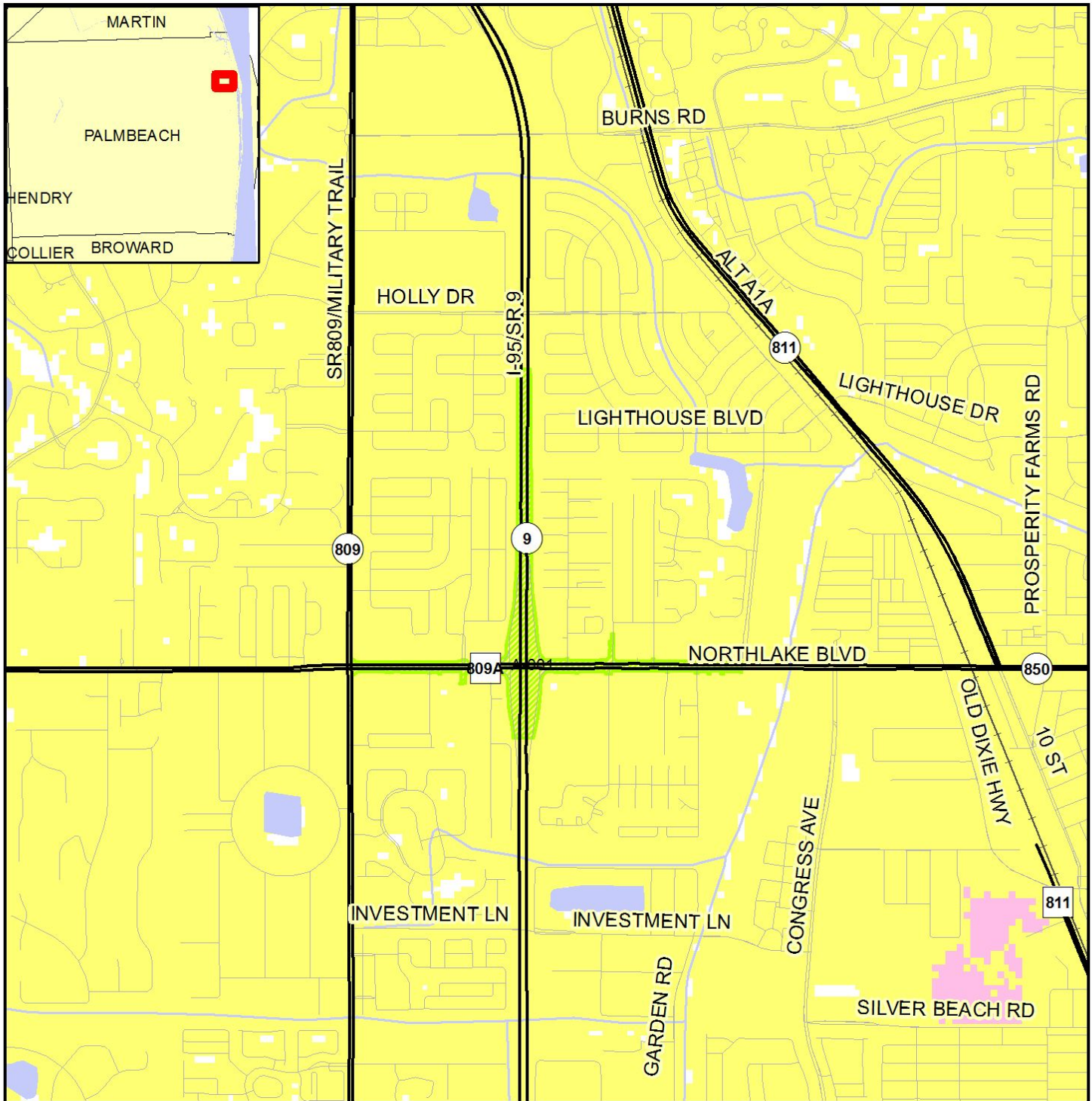
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 Florida Department of Transportation

14182 SR-9/I-95 at Northlake Boulevard Interchange



0 0.6 Miles



Data Sources:
NAVTEQ
US Geological Survey
Florida Department of Transportation
Florida Fish & Wildlife Conservation Commission

Integrated Wildlife Habitat Ranking System Map

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ▨ ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- Water Body
- Low Habitat Quality
- Medium Habitat Quality
- High Habitat Quality

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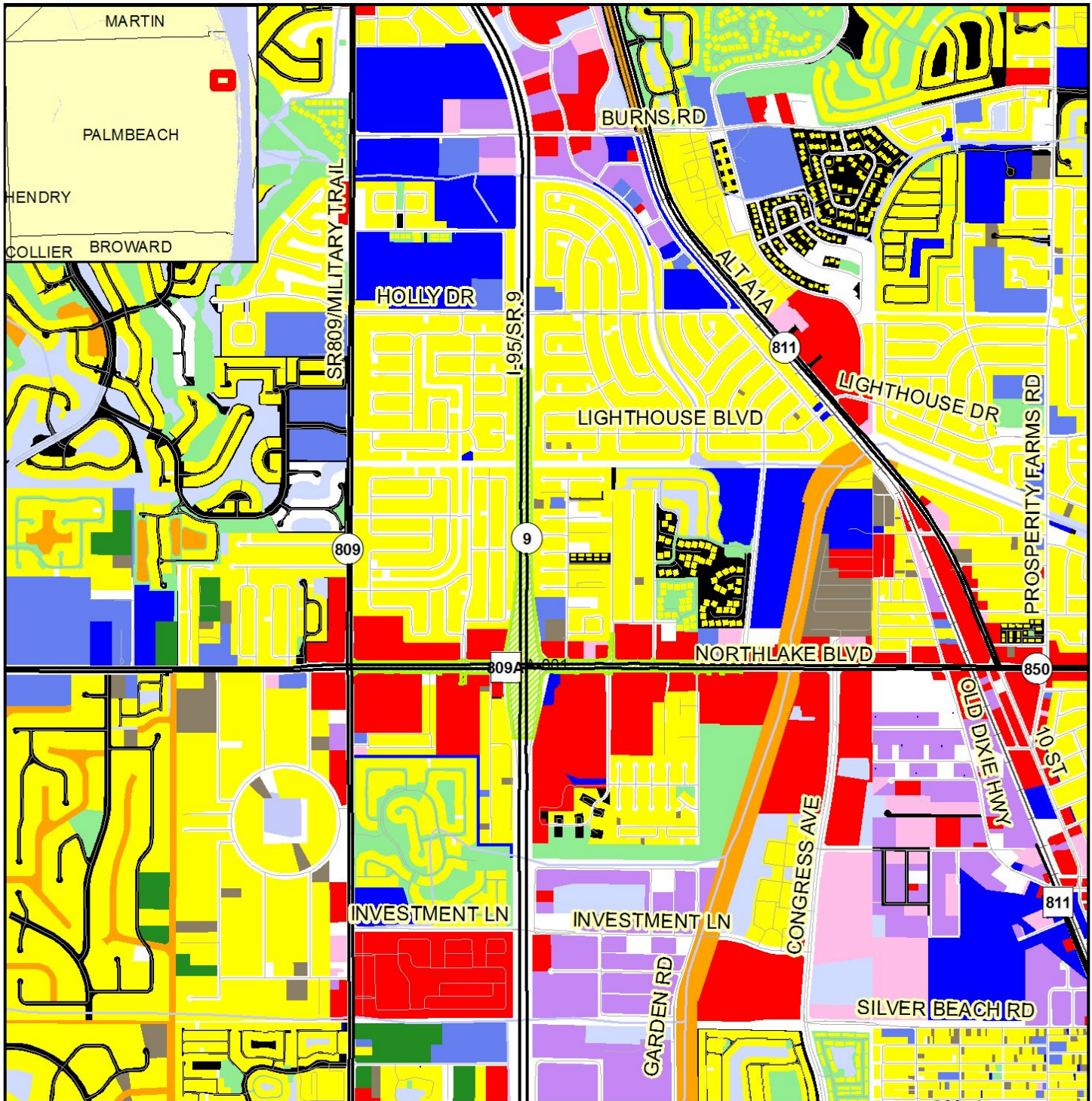
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Map Generated on: 7/28/2014

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14182 SR-9/I-95 at Northlake Boulevard Interchange



Land Use Map

- | | | | |
|-----------------------------|--------------------------|---------------------------|---------------------------|
| ● ETDM Alternative Point | — Railroad | ■ Open (Not Agricultural) | ■ Retail/Office |
| ● ETDM Alternative Terminus | — River, Stream or Canal | ■ Other | ■ Vacant (Residential) |
| — ETDM Alternative Segment | ■ Agricultural | ■ Public | ■ Vacant (Nonresidential) |
| ■ ETDM Alternative Polygon | ■ Industrial | ■ Right-of-Way | ■ Water |
| — Major Road | ■ Institutional | ■ Recreational | □ No Data |
| — Local Road or Trail | ■ Mining | ■ Residential | |

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Revenue
 Florida Department of Transportation
 Florida County Property Appraiser Offices

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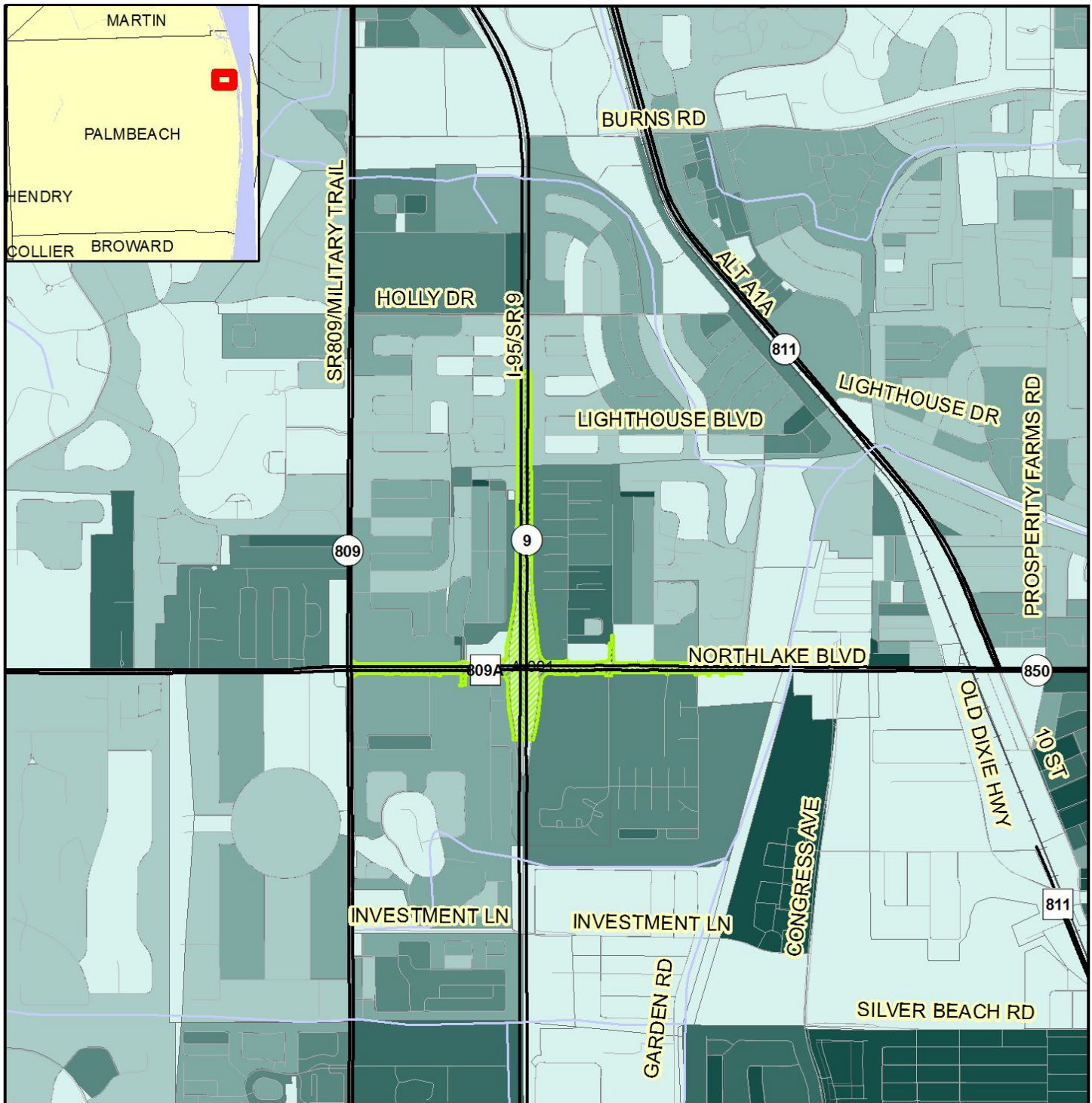
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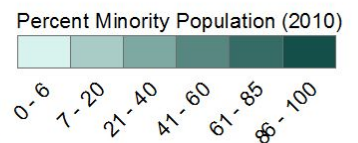
Minority Population Distribution Map

0 0.09 Miles



Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- Water Body



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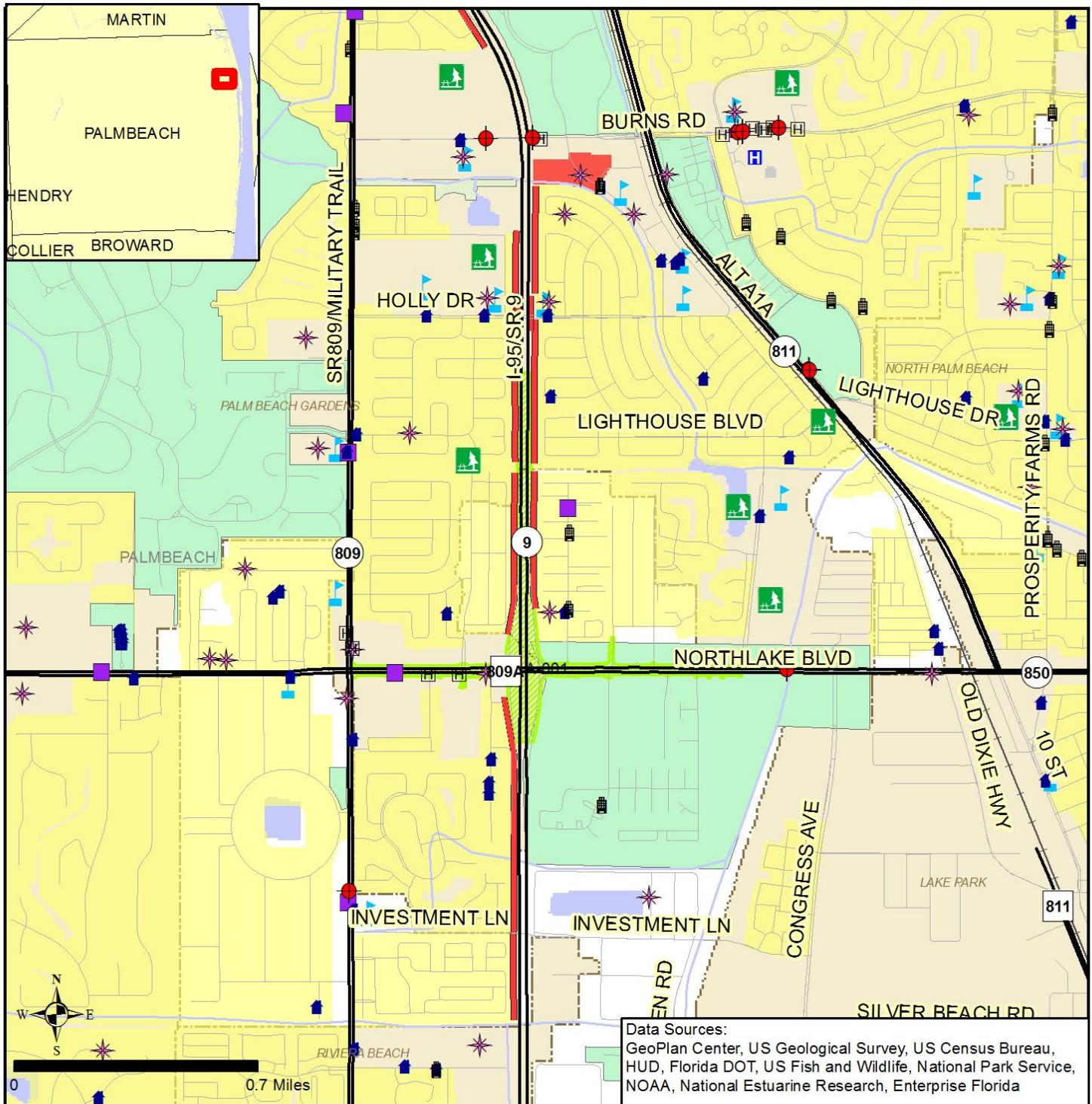
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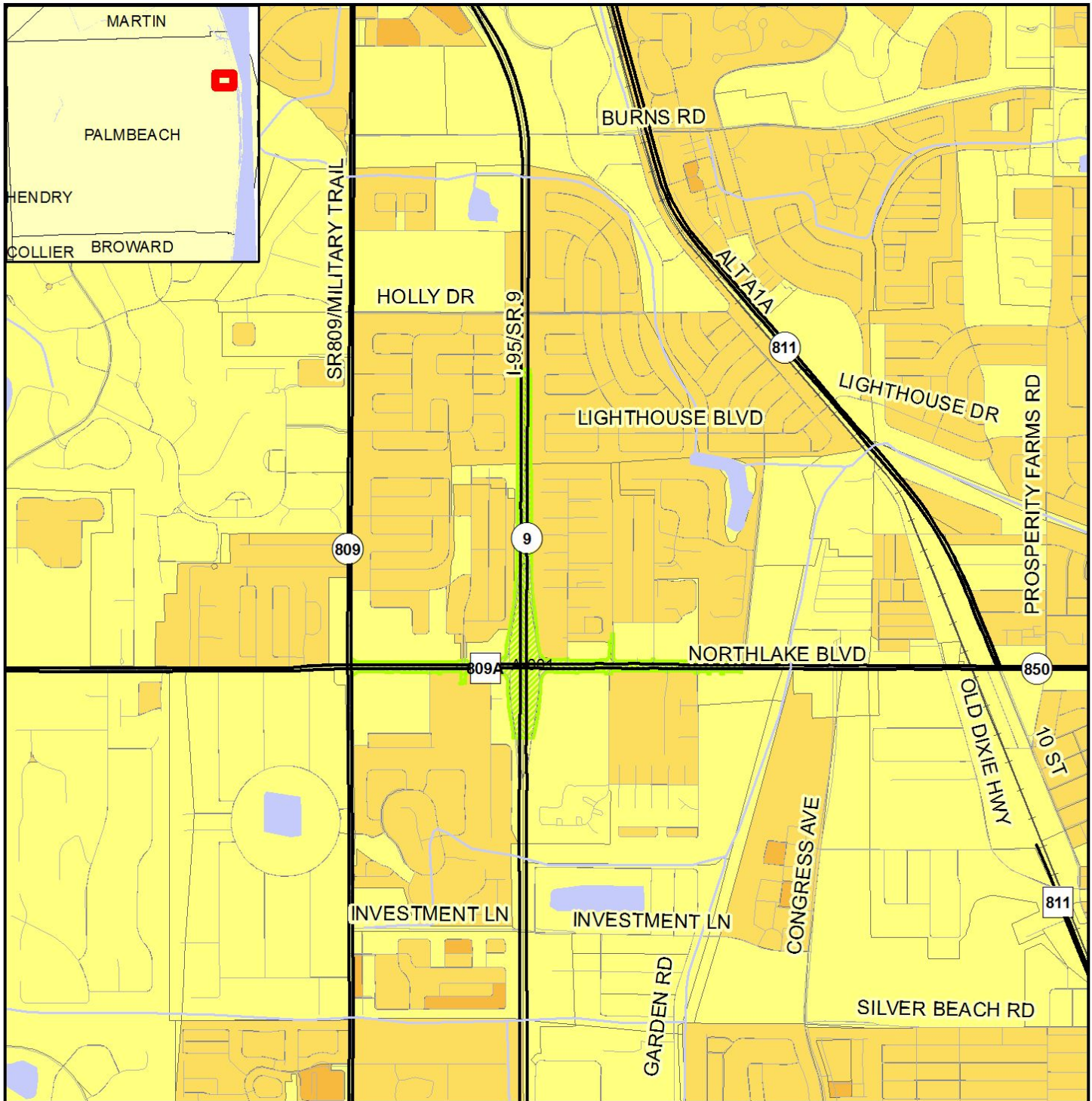


Noise Map

- | | | | | |
|---------------------------|---------------------------|-----------------------|---------------------------|--------------------------|
| ETDM Alternative Point | Existing Trails | Laser On-site | Place of Worship | Military Installations |
| ETDM Alternative Segment | Railroad | Group Care Facilities | School | Industrial |
| ETDM Alternative Polygon | River, Stream or Canal | Cemetery | Historic Cemetery | Residential |
| ETDM Alternative Terminus | Water Body | Community Center | Planned Unit Developments | HUD Renewal |
| County Boundaries | Swamp/Marsh | Cultural Center | Wildlife Refuges | Nat'l Estuarine Reserves |
| City Limits | Airport | Health Care | National Parks | Enterprise Zones |
| Major Road | Condo Owners Associations | Park | National Park Projects | DRI |
| Local Road or Trail | Hospitals | | | |
| Noise Barriers | | | | |

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14182 SR-9/I-95 at Northlake Boulevard Interchange



0.04 Miles

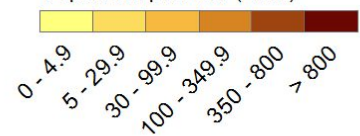


Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ETDM Alternative Polygon
- Major Road
- Local Road or Trail
- Railroad
- River, Stream or Canal
- Water Body

Population Density Map

Population per Acre (2010)



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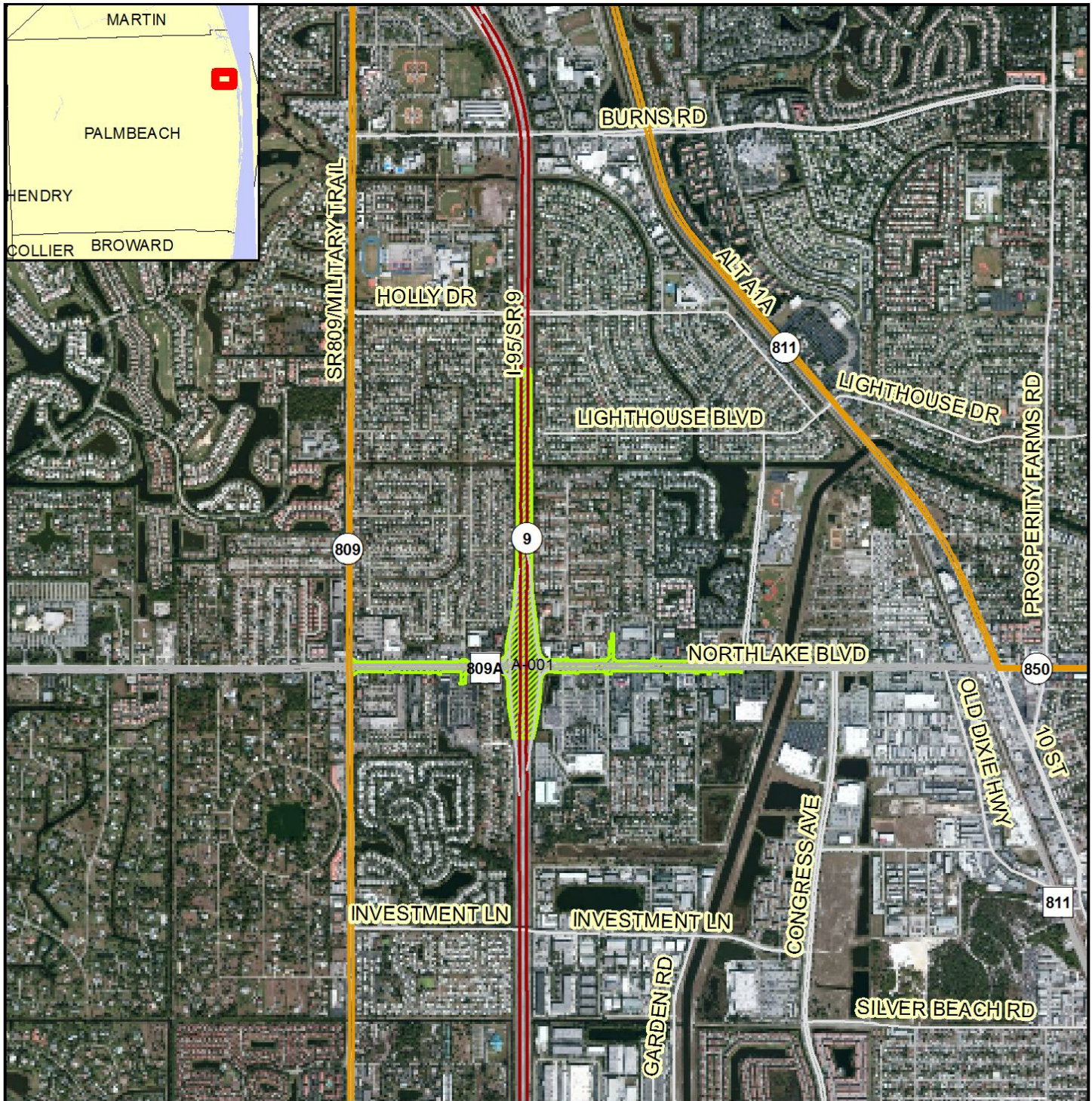
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Project Aerial Map



Data Sources:
Highways - NAVTEQ
Digital Orthophotograph - US Geological Survey

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ▨ ETDM Alternative Polygon
- Primary and Limited Access Highway
- Secondary, Unlimited Access Highway
- Other Highway Feature
- Local Road

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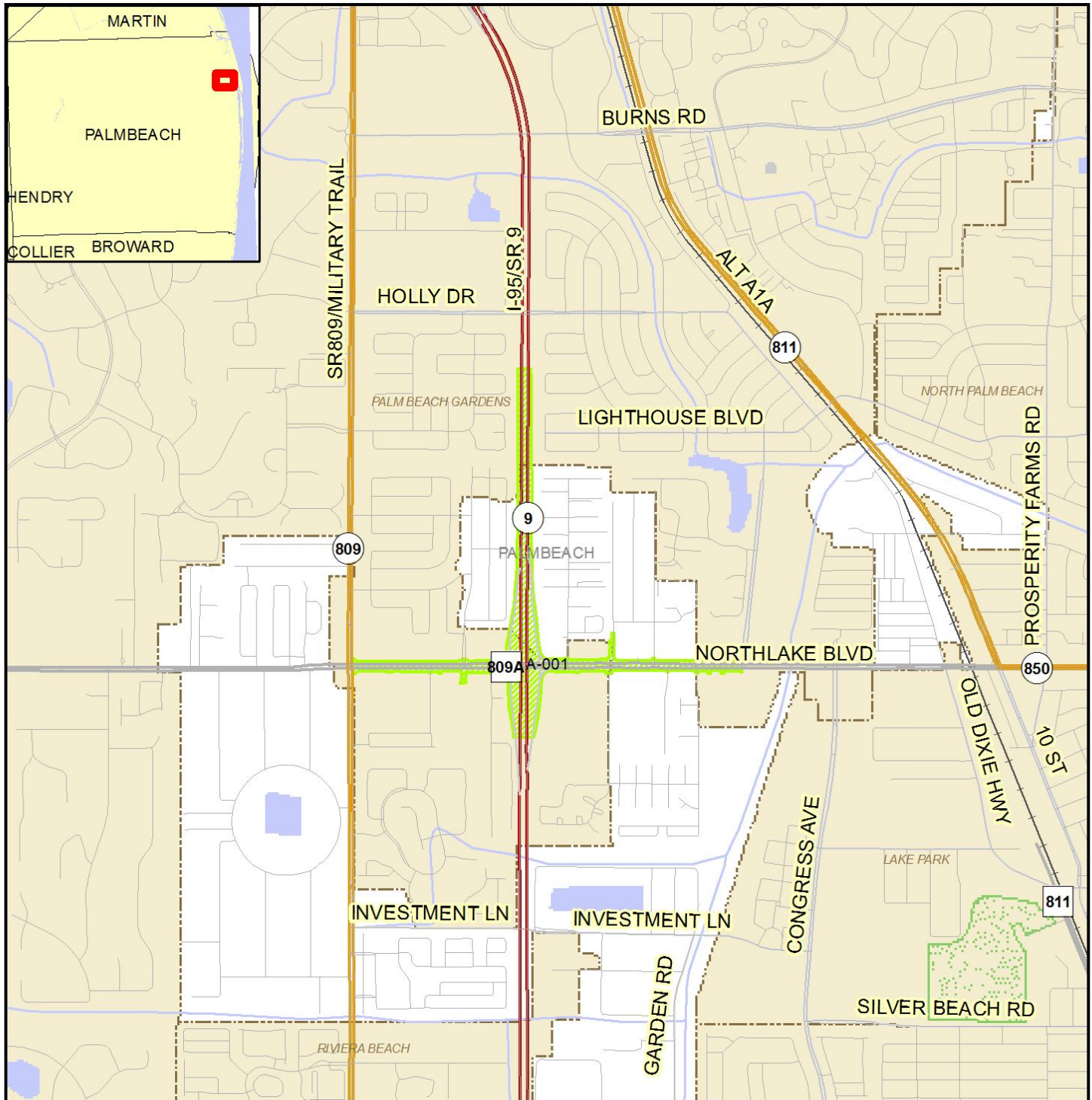
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Environmental Screening Tool

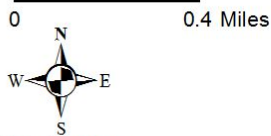
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Project Location Map



Data Sources:
 NAVTEQ
 US Geological Survey
 US Census Bureau
 County Property Appraisers
 Florida Natural Areas Inventory

- | | | |
|--|--|---|
| ● ETDM Alternative Point | — River, Stream or Canal | — Toll Road |
| ● ETDM Alternative Terminus | ■ Water Body | — Railroad |
| — ETDM Alternative Segment | ■ Swamp/Marsh | ■ Airport |
| ■ ETDM Alternative Polygon | ■ Managed Conservation Lands | ■ City Limits |
| | | ■ County Boundaries |

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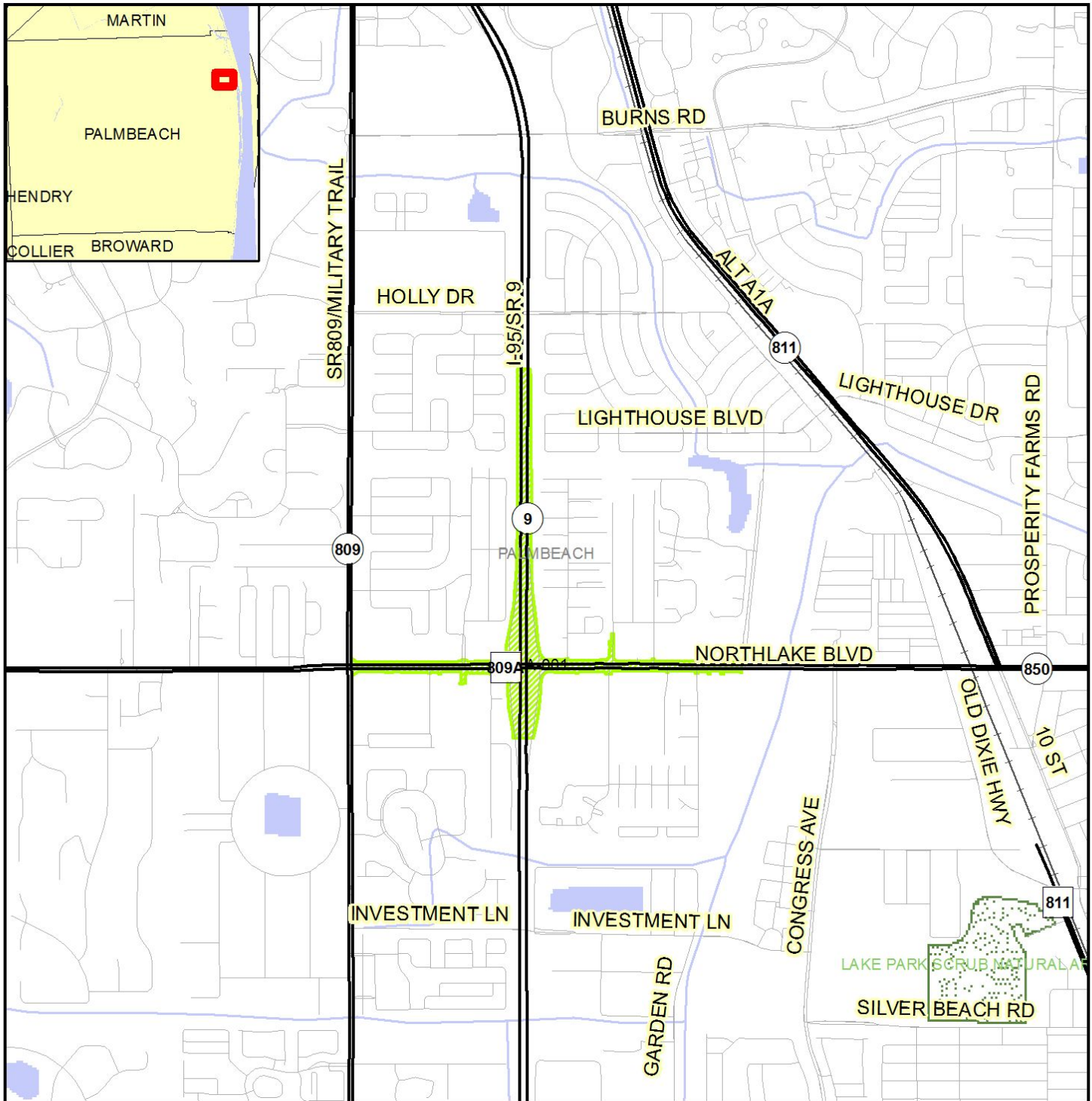
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 Florida Department of Transportation

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Conservation and Recreation Area Map

0 0.7 Miles



Data Sources:
NAVTEQ
US Geological Survey
Florida Natural Areas Inventory

- ETDM Alternative Point
- ETDM Alternative Segment
- ETDM Alternative Polygon
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- River, Stream or Canal
- Water Body
- Swamp/Marsh
- Conservation or Recreation Area
- Railroad
- County Boundary

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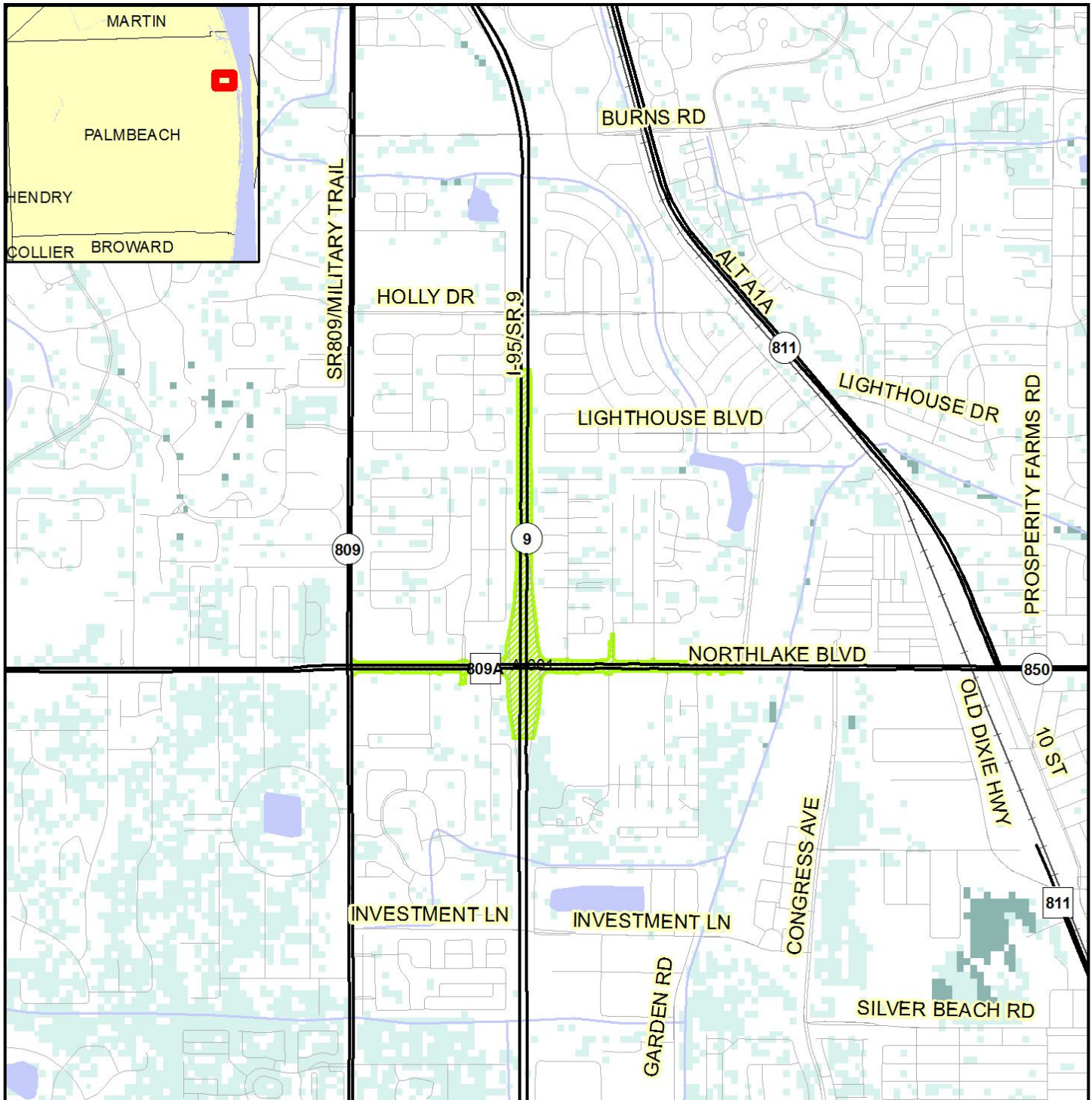
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0 0.5 Miles



Data Sources:

NAVTEQ

US Geological Survey

Florida Department of Transportation

Florida Fish & Wildlife Conservation Commission

- ETDM Alternative Point
- ETDM Alternative Terminus
- ETDM Alternative Segment
- ▨ ETDM Alternative Polygon
- Major Road
- Local Road or Trail

- Railroad
- River, Stream or Canal
- Water Body

Species Potential Habitat Model Map

Potential Habitat Richness

- 1 - 2 Species
- 3 - 5 Species
- 6 - 8 Species
- 9 - 10 Species
- 11 - 13 Species

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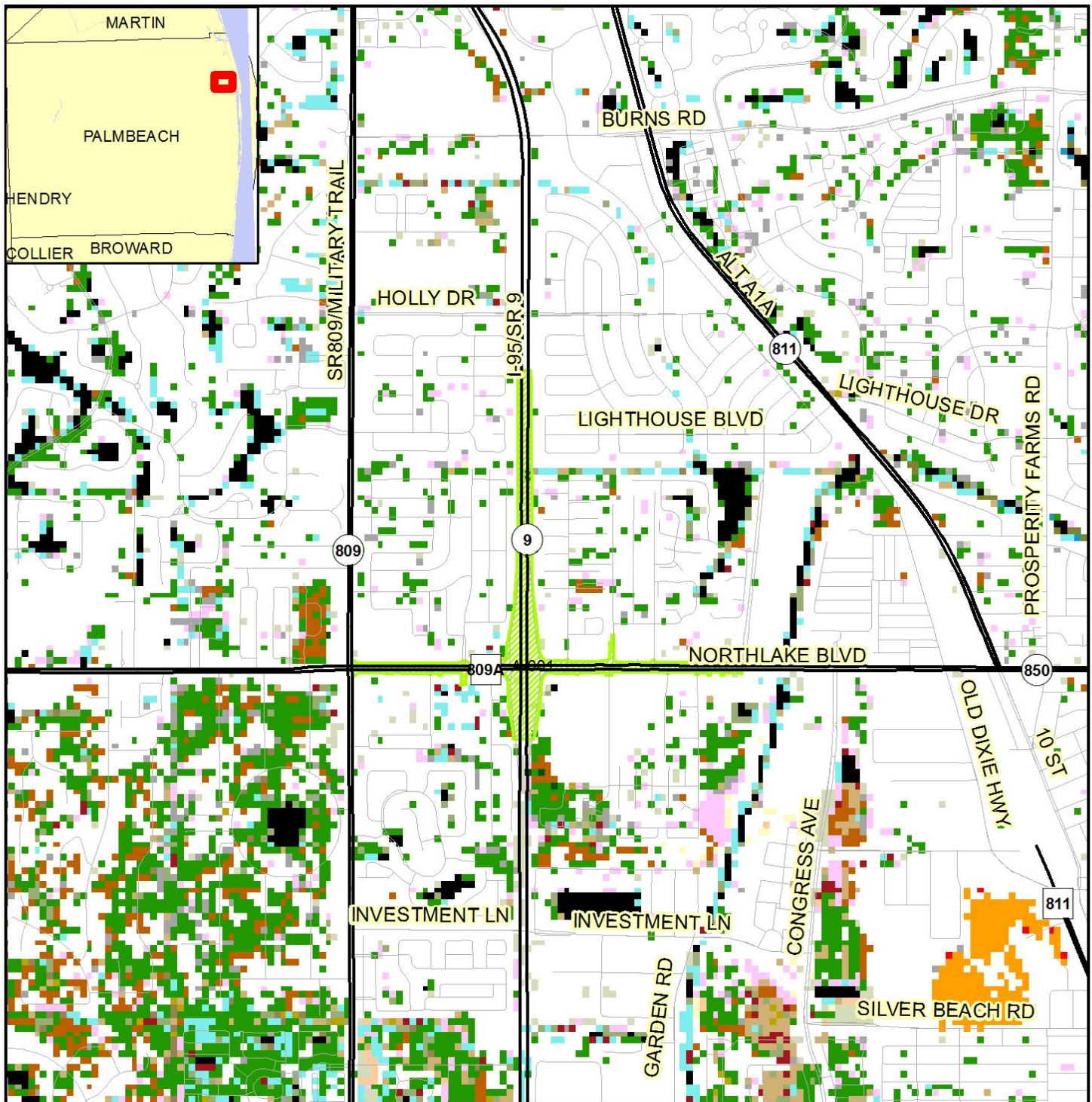
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0 0.7 Miles

Vegetation and Land Cover Map

ETDM Alternative Polygon	Not Classified	Hardwood Hammocks and Forests	Bay Swamp	Mangrove Swamp	Unimproved Pasture	Brazilian Pepper
ETDM Alternative Segment	Coastal Strand	Pinelands	Cypress Swamp	Scrub Mangrove	Sugarcane	High Impact Urban
ETDM Alternative Terminus	Sand/Beach	Cabbage Palm-live Oak Hammock	Cypress/Pine/Cabbage Palm	Tidal Flats	Citrus	Low Impact Urban
ETDM Alternative Point	Xeric Oak Scrub	Tropical Hardwood Hammock	Mixed Wetland Forest	Open Water	Row and Field Crops	Extractive
Major Road	Sand Pine Scrub	Freshwater Marsh and Wet Prairie	Hardwood Swamp	Shrub and Brushland	Other Agriculture	
Local Road or Trail	Sandhill	Sawgrass Marsh	Hydric Hammock	Grassland	Exotic Plants	
	Dry Prairie	Cattail Marsh	Bottomland Hardwood Forest	Bare Soil/Clearcut	Australian Pine	
	Mixed Hardwood-pine Forest	Shrub Swamp	Salt Marsh	Improved Pasture	Melaleuca	

Data Sources:

NAVTEQ; Florida Department of Transportation; Florida Fish and Wildlife Conservation Commission

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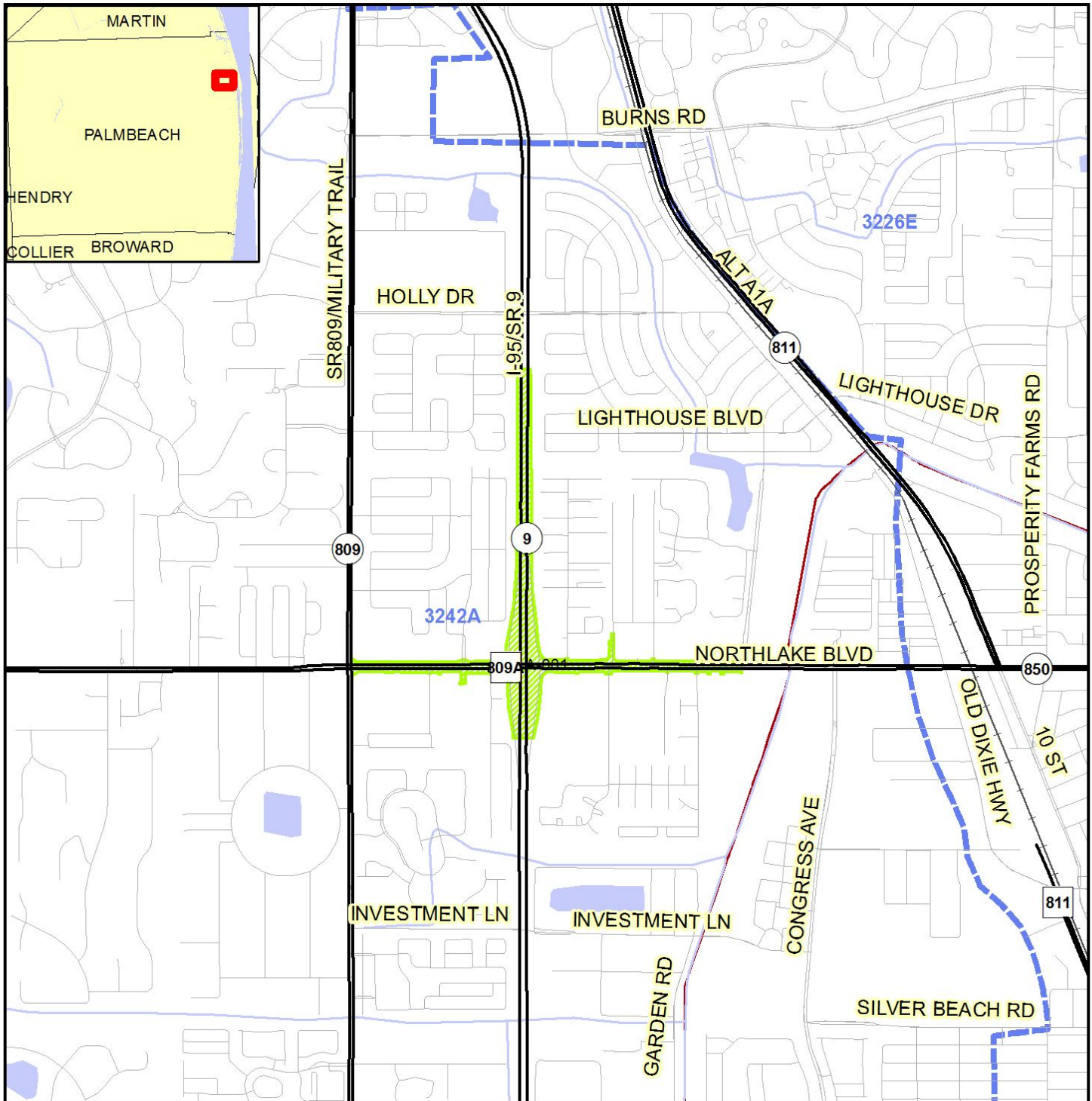
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Environmental Screening Tool

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14182 SR-9/I-95 at Northlake Boulevard Interchange



0.7 Miles

Water Resources Map

Data Sources:

NAVTEQ

US Geological Survey

Major Road

Local Road or Trail

Florida Department of Transportation

Florida Department of Environmental Protection

Florida Geological Survey

US Bureau of Transportation Statistics

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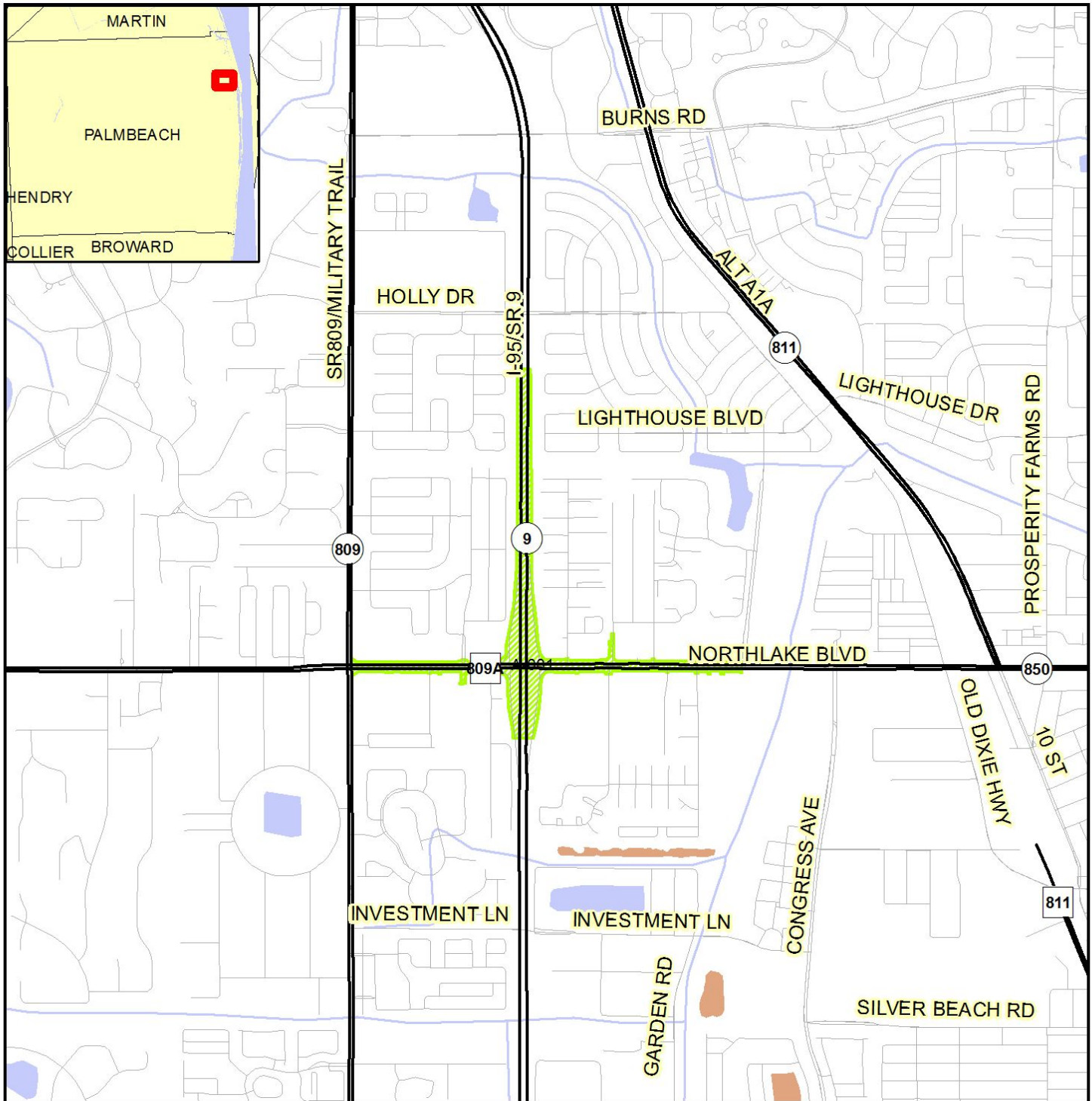
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Wetland Resource Map

0 0.3 Miles



- | | | |
|---------------------------|------------------------|--------------------------------|
| ETDM Alternative Polygon | Major Road | Non-vegetated Wetland |
| ETDM Alternative Segment | Local Road or Trail | Vegetated Non-forested Wetland |
| ETDM Alternative Terminus | River, Stream or Canal | Wetland Forested Mixed |
| ETDM Alternative Point | Water Body | Wetland Coniferous Forest |
| | | Wetland Hardwood Forest |

Data Sources: NAVTEQ; Florida Water Management Districts; US Geological Survey

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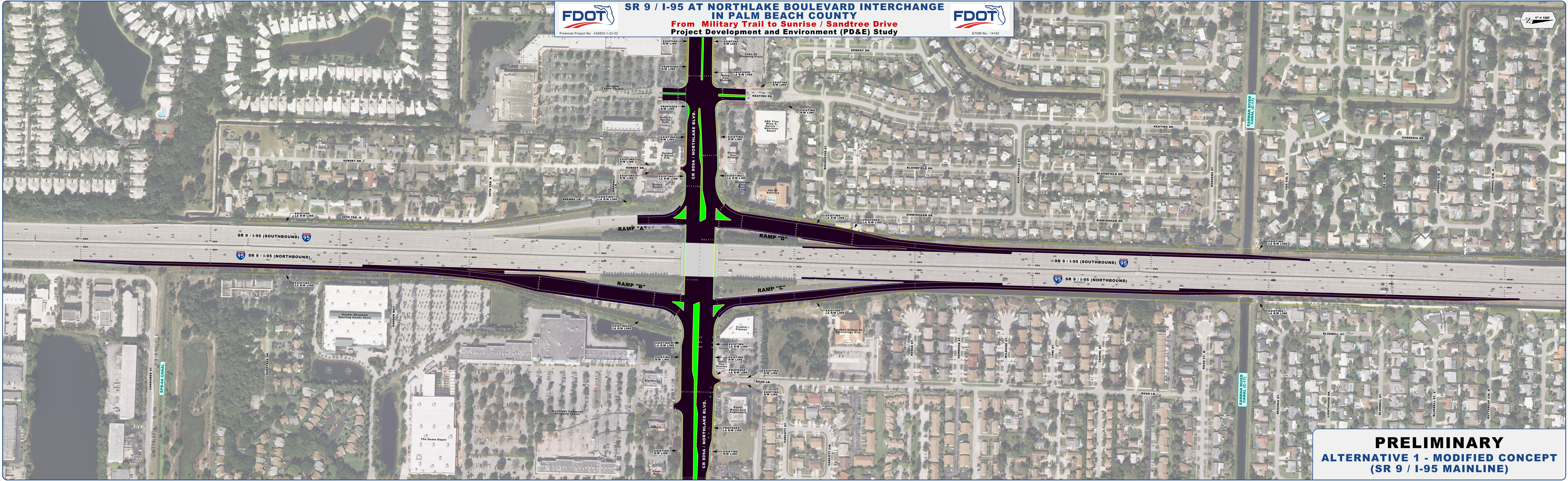
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Environmental Screening Tool

Map Generated on: 7/28/2014

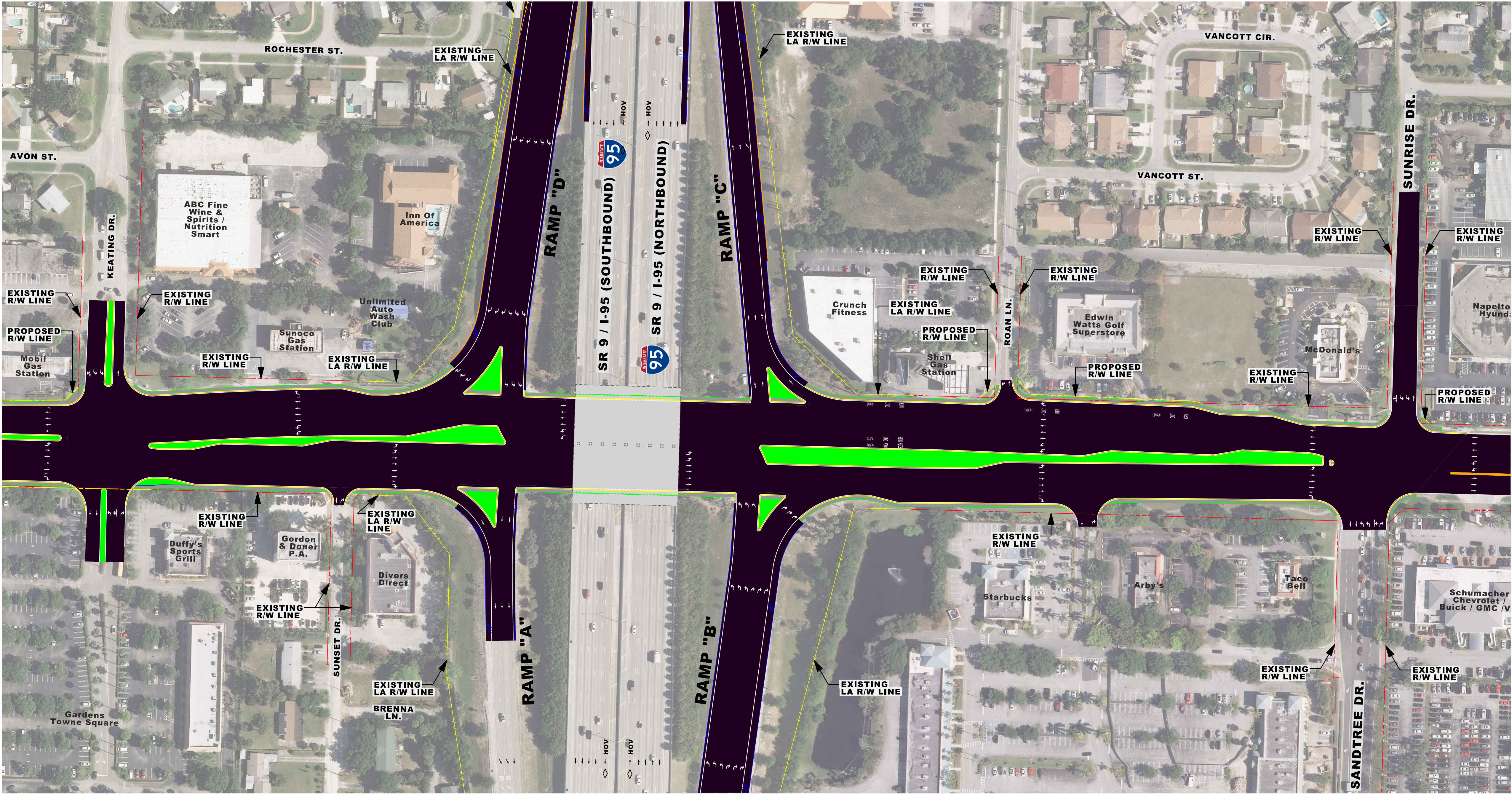
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Appendix B

Alternative Concepts



PRELIMINARY
ALTERNATIVE 1 - MODIFIED CONCEPT
(SR 9 / I-95 MAINLINE)





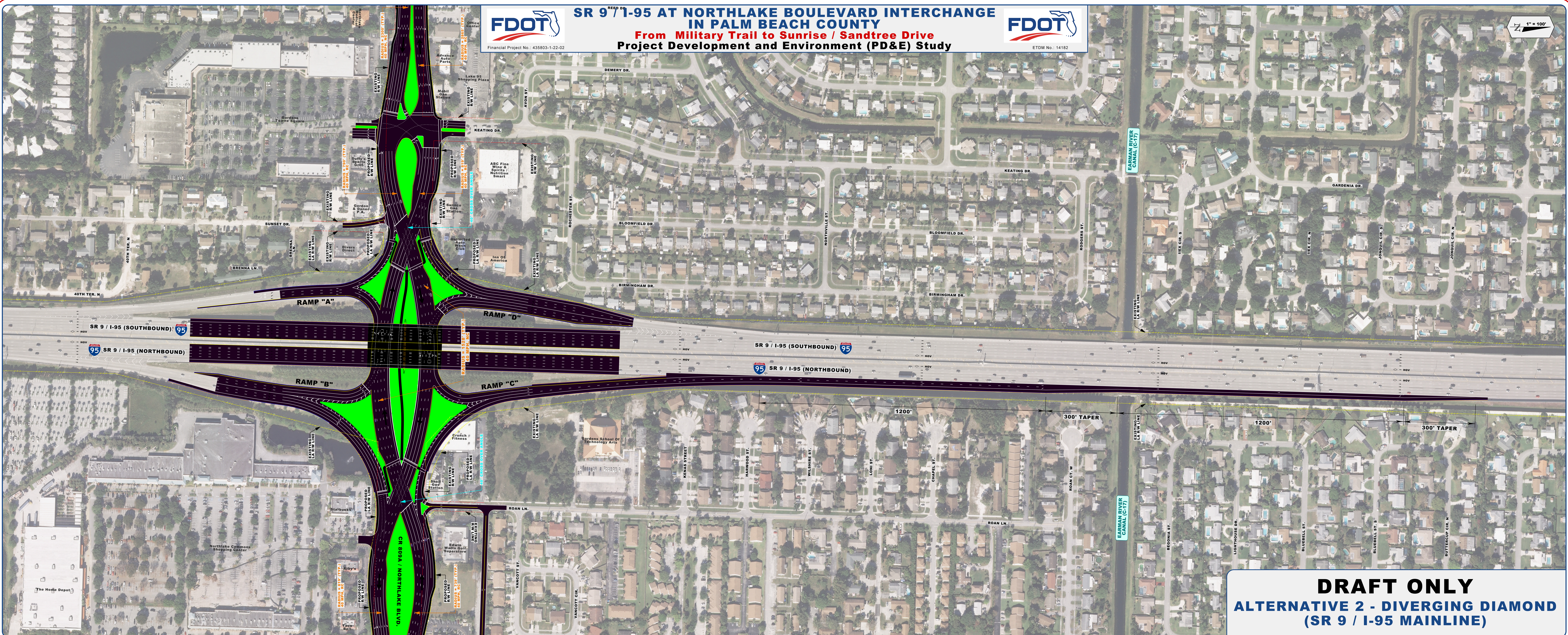
SR 9 / I-95 AT NORTHLAKE BOULEVARD INTERCHANGE
IN PALM BEACH COUNTY

From Military Trail to Sunrise / Sandtree Drive
Project Development and Environment (PD&E) Study



ETDM No.: 14182

1" = 100'



DRAFT ONLY
ALTERNATIVE 2 - DIVERGING DIAMOND
(SR 9 / I-95 MAINLINE)



Financial Project No.: 435803-1-22-02

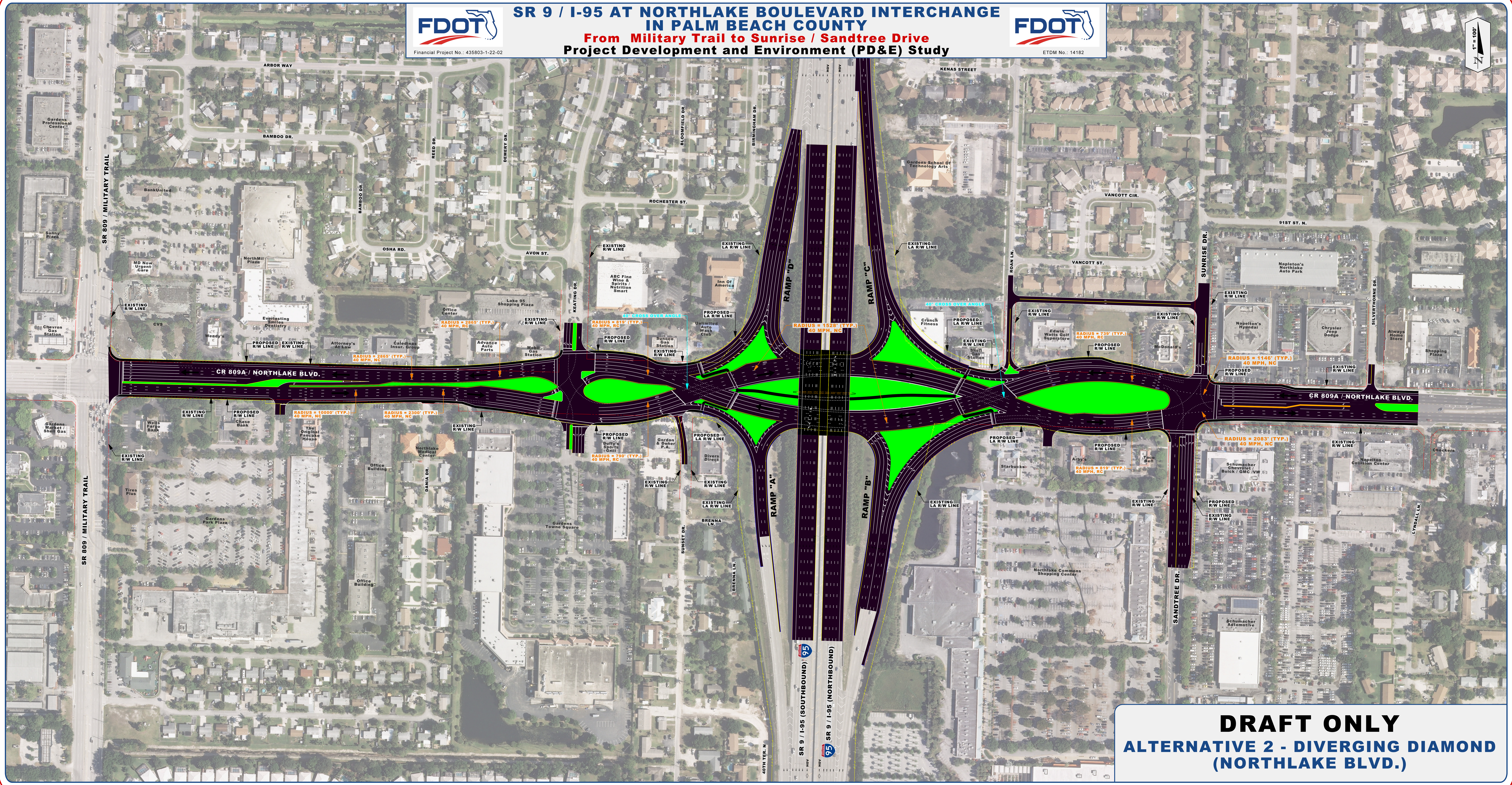
SR 9 / I-95 AT NORTHLAKE BOULEVARD INTERCHANGE IN PALM BEACH COUNTY

From Military Trail to Sunrise / Sandtree Drive
Project Development and Environment (PD&E) Study

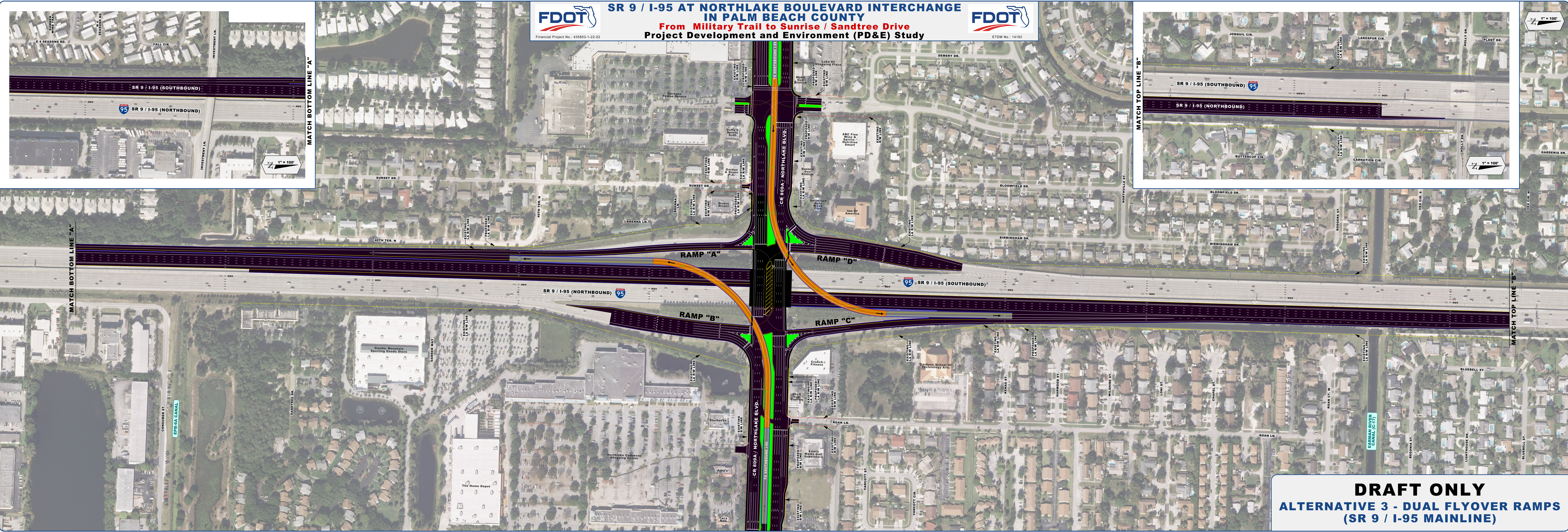


ETDM No.: 14182

1" = 100'



DRAFT ONLY
ALTERNATIVE 2 - DIVERGING DIAMOND
(NORTHLAKE BLVD.)



DRAFT ONLY
ALTERNATIVE 3 - DUAL FLYOVER RAMP
(SR 9 / I-95 MAINLINE)



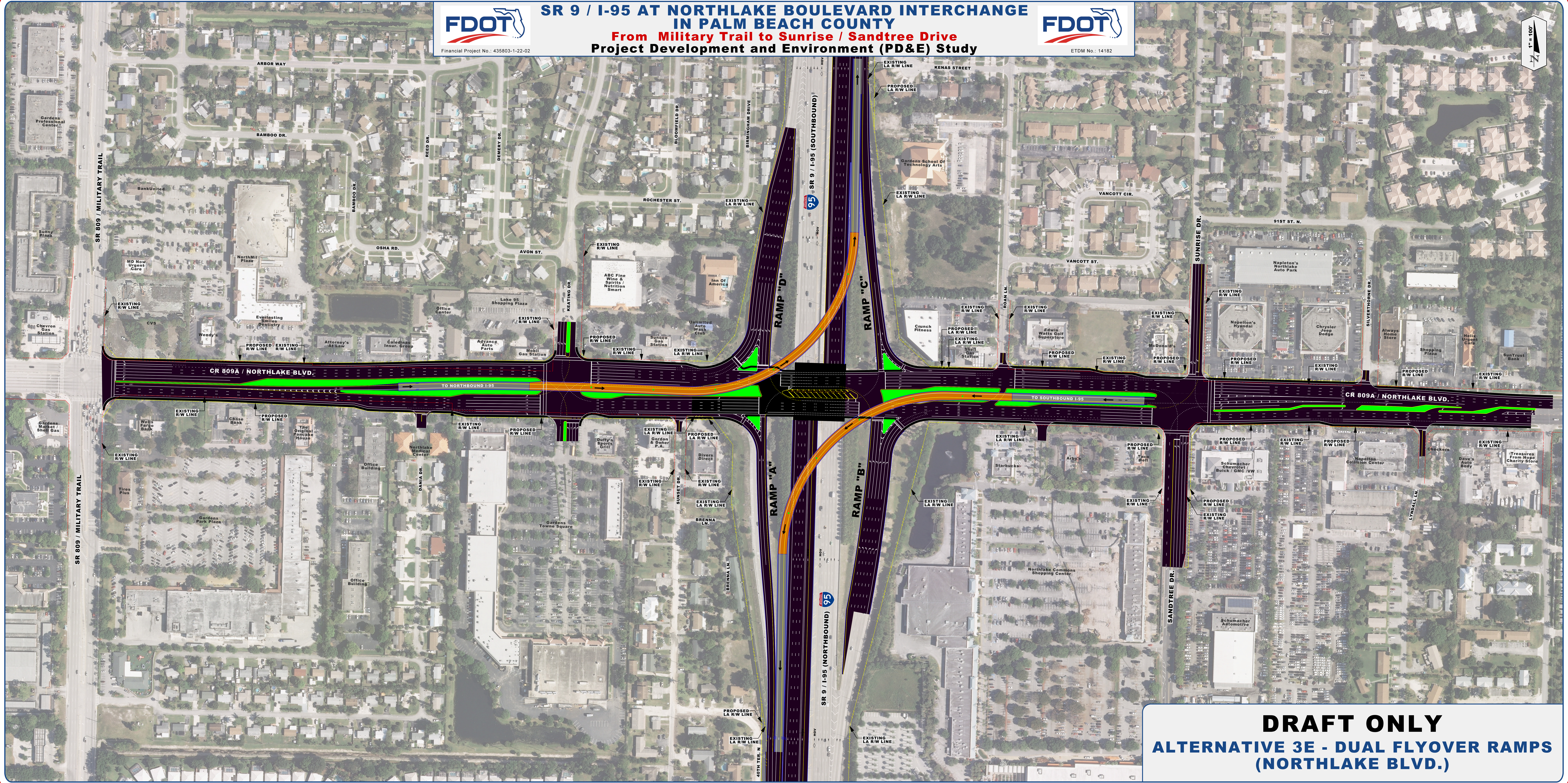
Financial Project No.: 435803-1-22-02

SR 9 / I-95 AT NORTHLAKE BOULEVARD INTERCHANGE IN PALM BEACH COUNTY

From Military Trail to Sunrise / Sandtree Drive
Project Development and Environment (PD&E) Study



ETDM No.: 14182



DRAFT ONLY
ALTERNATIVE 3E - DUAL FLYOVER RAMPS
(NORTHLAKE BLVD.)

Appendix C

Soil Report



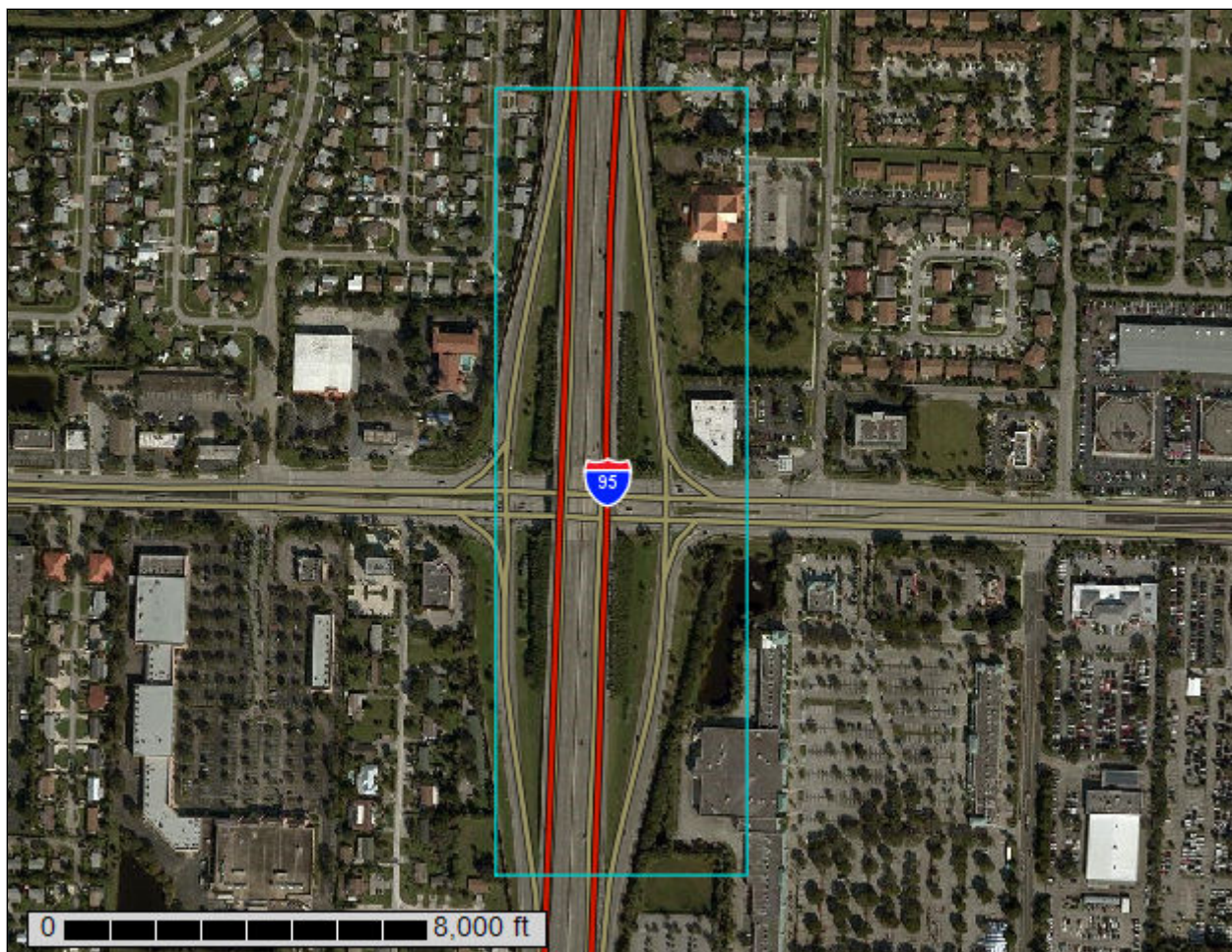
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Palm Beach County Area, Florida**



January 16, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

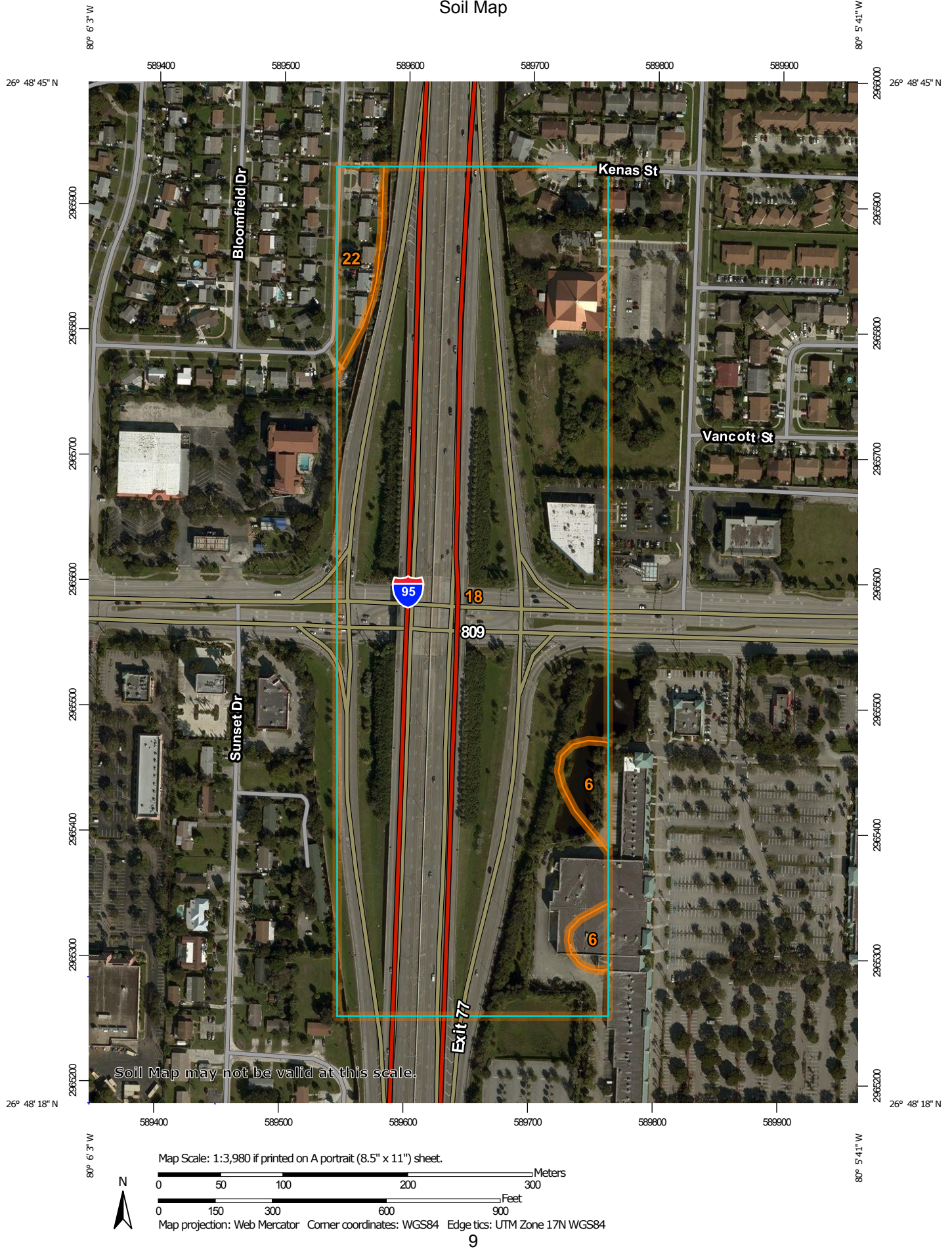
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report Soil Map



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MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other


 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Palm Beach County Area, Florida
Survey Area Data: Version 12, Sep 14, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 13, 2014—Dec 11, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Palm Beach County Area, Florida (FL611)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Basinger fine sand, 0 to 2 percent slopes	0.9	2.5%
18	Immokalee fine sand, 0 to 2 percent slopes	34.6	94.4%
22	Myakka-Urban land complex	1.1	3.1%
Totals for Area of Interest		36.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Palm Beach County Area, Florida

6—Basinger fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svym

Elevation: 0 to 20 feet

Mean annual precipitation: 38 to 62 inches

Mean annual air temperature: 68 to 77 degrees F

Frost-free period: 300 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Basinger and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger

Setting

Landform: Drainageways on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Convex, concave

Across-slope shape: Linear, concave

Parent material: Sandy marine deposits

Typical profile

Ag - 0 to 2 inches: fine sand

Eg - 2 to 18 inches: fine sand

Bh/E - 18 to 36 inches: fine sand

Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 2 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Hydric soil rating: Yes

Minor Components

Eaugallie

Percent of map unit: 4 percent

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Tread, tal

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: South Florida Flatwoods (R155XY003FL)

Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Hydric soil rating: No

Margate

Percent of map unit: 3 percent

Landform: Drainageways on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Convex, linear

Across-slope shape: Linear, concave

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G156AC145FL)

Hydric soil rating: Yes

Placid, depressional

Percent of map unit: 3 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave, convex

Across-slope shape: Concave, linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)

Hydric soil rating: Yes

18—Immokalee fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s3lk

Elevation: 0 to 160 feet

Mean annual precipitation: 44 to 61 inches

Mean annual air temperature: 68 to 77 degrees F

Frost-free period: 335 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Immokalee and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Immokalee

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 35 inches: fine sand
Bh - 35 to 54 inches: fine sand
BC - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Basinger, depressional

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear

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Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pomello

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluvium, riser
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: Sand Pine Scrub (R155XY001FL)
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Margate

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G156AC145FL)
Hydric soil rating: Yes

Placid, depressional

Percent of map unit: 1 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

22—Myakka-Urban land complex

Map Unit Setting

National map unit symbol: 1j7d8
Elevation: 10 to 100 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 358 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Myakka and similar soils: 50 percent
Urban land: 40 percent

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Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myakka

Setting

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: sand

E - 7 to 26 inches: sand

Bh - 26 to 47 inches: sand

C - 47 to 72 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

Other vegetative classification: Forage suitability group not assigned (G156AC999FL)

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Marine terraces

Landform position (three-dimensional): Interfluve, talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified

Other vegetative classification: Forage suitability group not assigned (G156AC999FL)

Hydric soil rating: Unranked

Minor Components

Basinger

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Forage suitability group not assigned
(G156AC999FL)
Hydric soil rating: Yes

Immokalee

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned
(G156AC999FL)
Hydric soil rating: No

Pompano

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Forage suitability group not assigned
(G156AC999FL)
Hydric soil rating: Yes

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Appendix D

Interagency Minutes

**FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT IV INTERAGENCY MEETING MINUTES**

TO: Hui Shi, Florida Department of Transportation (FDOT) District 4
FROM: Justin Freedman, E Sciences, Incorporated
MEETING DATE: January 19, 2017
LOCATION: South Florida Water Management District (SFWMD)
3301 Gun Club Road, West Palm Beach, Florida
SUBJECT: FDOT Interagency Meeting Minutes

Meeting 1 started at 9:00 AM: FM not available

Attendees:

Name	Organization	Email Address
Carlos de Rojas	SFWMD	cderojas@sfwmd.gov
Caroline Hanes	SFWMD	chanes@sfwmd.gov
Carolyn Beisner	PBC ERM	cbeisner@pbcgov.org
Carmen Vare	PBC ERM	cvare@pbcgov.org
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Hui Shi	FDOT Drainage	Hui.Shi@dot.state.fl.us
Justin Freedman	E Sciences, Incorporated	jfreedman@esciencesinc.com

District: Four

FPID/FM Number: N/A

FDOT Project Manager: Fernando Ascanio

Consultant/Company Name: FDOT District 4

SR/Local Name: Snook Island Mangrove and Seagrass Mitigation.

Project Limits: Snook Islands, City of Lake Worth, Palm Beach County.

General Scope: Construction of additional mangrove and seagrass habitats at Snook Islands to serve as future mitigation for FDOT projects.

Requested Attendees: SFWMD Environmental Resources, USACE.

- Carolyn Beisner mentioned that ± 0.56 acres of mangrove enhancement and 0.63 acres of seagrass restoration is proposed per original JPA (**see attached figure**).
- Justin Freedman pointed out that FDOT is not assigning this mitigation to a specific transportation project at this time.
- Carmen Vare added that the mitigation functional values (UMAM scores) are unchanged from what was permitted by SFWMD.
- Mr. Vare and Ms. Beisner stated the mitigation construction may not be complete by the current permit expiration date of October 2017.
- Caroline Hanes stated that FDOT could get an ERP extension (vs. modification) since the proposed project has not changed from what was permitted. She added that FDOT may be able to obtain a “free” ERP extension (up to 6-8 months) in association with either Hurricane Matthew or a recent algae bloom.

- Mr. Freedman asked when mitigation would be available for use on an FDOT project. Ms. Beisner stated that certain percentages of the mitigation will be available at different time intervals, and that these intervals are outlined in the ERP.
- Mr. Vare stated that the USACE permit for the Snook Islands mitigation project has expired but ERM is in process of getting the USACE permit renewed.

Meeting topic changed to Southern Boulevard Bridge Reconstruction:

- Ms. Beisner stated that the “Palm Beachers” (private group) have been granted permission by Audobon Society to remove exotics and plant native vegetation on Bingham Island adjacent to FDOT’s ROW (work to start next month). She added that this group may also be willing to clear a fence line and remove exotics within the FDOT ROW.
- Mr. Freedman and Fernando Ascanio stated that the “Palm Beachers” would need a permit from FDOT to work in FDOT ROW and suggested setting up a meeting with FDOT ROW staff to discuss this work.
- Mr. Freeman stated that current JPA would need to be revised to reflect work at Bingham Island. It will also need to be revised once a construction project is tied to the mitigation.

Meeting 1 ended at 9:20 AM.

Meeting 2 started at 9:20 AM: 435803-1-22-02

Attendees:

Name	Organization	Email Address
Carlos de Rojas	SFWMD	cderojas@sfwmd.gov
Caroline Hanes	SFWMD	chanes@sfwmd.gov
Renaud Olivier	Stanley Consultants	OlivierRenaud@stanleygroup.com
Courtney Arena	Stanley Consultants	ArenaCourtney@stanleygroup.com
Linda Ferreira	Stanley Consultants	FerreiraLinda@stanleygroup.com
Jamie Wilson	Stanley Consultants	WilsonJamie@stanleygroup.com
Bill Evans	Stanley Consultants	EvansBill@stanleygroup.com
Scott Thurman	FDOT Design	Scott.Thurman@dot.state.fl.us
Roberto Betancourt	FDOT Drainage	Roberto.Betancourt@dot.state.fl.us
Fernando Ascanio	FDOT PLEMO	Fernando.Ascanio@dot.state.fl.us
Hui Shi	FDOT Drainage	Hui.Shi@dot.state.fl.us
Justin Freedman	E Sciences, Incorporated	jfreedman@esciencesinc.com

District: Four

FPID/FM Number: 435803-1-22-02

FDOT Project Manager: Scott Thurman

Consultant/Company Name: Stanley Consultants, Inc.

SR/Local Name: SR-9/I-95

Project Limits: SR-9/I-95 at Northlake Boulevard interchange in Palm Beach County. I-95 limits extend 1/2 mile north and 1/2 mile south of Northlake Boulevard. The project also includes improvements along Northlake Boulevard between Military Trail and Sunset Drive.

General Scope: PD&E Study. Develop alternatives to improve overall traffic operations at the existing interchange.

Requested Attendees: SFWMD Environmental Resources and Surface Water Management staff, USACE staff.

- Bill Evans provided a verbal project overview and provided meeting attendees with a hard copy map of the project's likely preferred alternative:
 - The PD&E Project involves examination of three build alternatives for interchange improvement (to meet traffic needs in 2040).
 - Alternative 1 –current conventional interchange with ramp improvements.
 - Alternative 2 – diverging diamond interchange (DDI), depicted on hand out (**see attached figure**).
 - Alternative 3 – dual lane fly over (east bound to northbound movement over I-95, and westbound to southbound over I-95).
 - All alternatives add lane along Northlake Boulevard in east-west direction to make eight lanes between Military Trail and Sunset Drive.
 - Project team currently leaning towards Alternative 2.
 - Estimated schedule:
 - PD&E documents to be prepared over next couple months.
 - Public hearing – September/October 2017.
 - Complete project in December.

- Courtney Arena discussed project environmental issues:
 - The intersection is generally urbanized.
 - The project is within USFWS Consultation Area for scrub jay, but no habitat for this species is present.
 - The project is within a wood stork Core Foraging Area (CFA), though no foraging habitat is present for this species within the project limits.
 - Minor impacts to a canal (extension of C-17 Canal) are anticipated in association with culvert extension for road widening (would be “other surface water” impacts). Courtney added that this section of the canal is actively maintained, and that no protected resources were observed.
 - Cypress trees are present along the canal bank (**see attached photos**). However, one design alternative may require acquisition of a portion of a pond adjacent to the canal – this alternative may result in cypress tree impacts. Caroline Hanes commented that the cypress trees appear to have been planted, and impacts to the trees would not be considered wetland impacts.
- Carlos de Rojas added that if the canal is part of SFWMD ROW, then the project team will need to coordinate with SFWMD ROW staff.
- Mr. Olivier stated that costs associated with partial acquisition of the pond will be included in FDOT’s overall “Cost(s) to Cure” calculations.
- Mr. Olivier provided additional project description details:
 - Northlake Boulevard is a six-lane divide urban section at present, and is proposed to be widened to eight lanes.
 - Northlake Boulevard is a north-south dividing line for drainage.
 - The I-95 bridge over Northlake Boulevard will need to be reconstructed.
 - Alternatives 1 and 3 may require acquisition of a parcel off the northwest corner of the intersection. Ms. Arena added that this parcel appears to consist of disturbed uplands (i.e. Brazilian pepper).
 - Preferred Alternative 2 provides more pervious area than other alternatives.
 - The proposed ramps will be triple-lefts and triple-rights (for all design alternatives).
 - There is an existing ERP along I-95. Water quality is currently being provided in dry detention areas within the interchange infields and I-95 mainline roadside swales. In addition there is exfiltration trench in the median which provides water quality. The proposed water quality approach is to provide treatment volume that is being provided today +2.5 inches over the additional impervious areas.
 - There is an existing ERP that covers Northlake Blvd. from Sunrise Drive to Sandtree Drive. Water quality is currently being provided in approximately 1200 feet of exfiltration trench. The proposed water quality approach for Northlake Blvd. is to provide treatment volume based on the greater of one inch over the project area or 2.5 inches over the impervious area.
 - The project discharge point is the C-17 Canal. It is not an OFW. However it is a water body identified on the statewide comprehensive verified list and currently impaired for nutrients.
 - Post development peak stages proposed to be below pre-development peak stages.

- Mr. Olivier stated that purpose of PD&E study is to identify agency concerns and provide cost effective design that addresses all concerns. Mr. Olivier added that the purpose of drainage report is to identify the potential need for off-site ponds (i.e. outside ROW).
- Mr. de Rojas stated that drainage design should accommodate either 2.5 inches of rainfall over all impervious areas or one inch of rainfall over the entire project area (pervious and impervious surfaces), whichever volume is greater.
- Mr. de Rojas stated that since the C-17 Canal is listed as “impaired for nutrients”, a pre vs post pollutant loading analysis will be required, and an additional 50% treatment may be also be required.

Meeting 2 ended at 9:50 AM.

Snook Islands Mangrove and Seagrass Mitigation

FM - Not Available

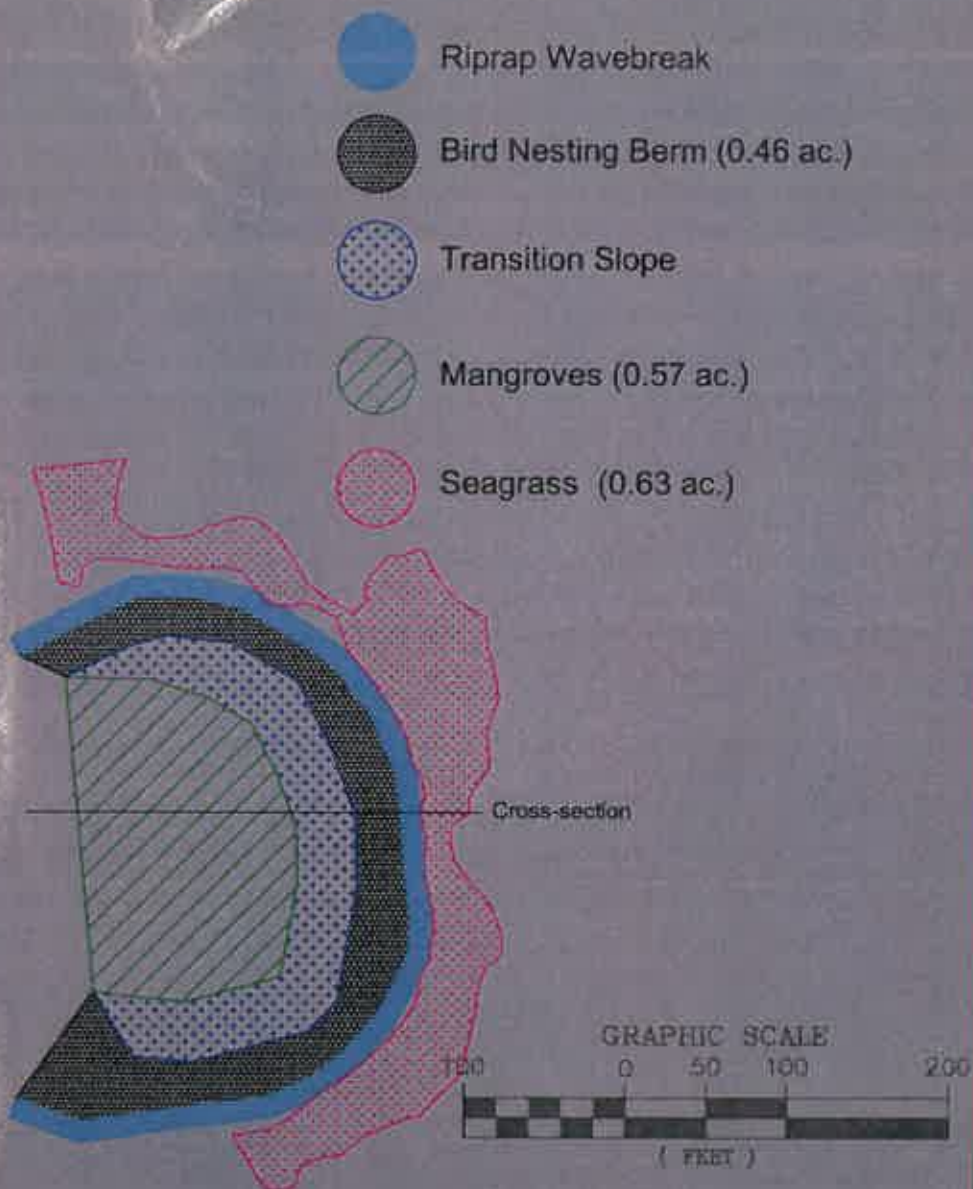
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SR 9/1-95 at Northlake Boulevard
FM 435803-1-22-02

SR 9/1-95 at Northlake Boulevard
FM 435803-1-22-02

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Snook Islands Fill Grading



ICW



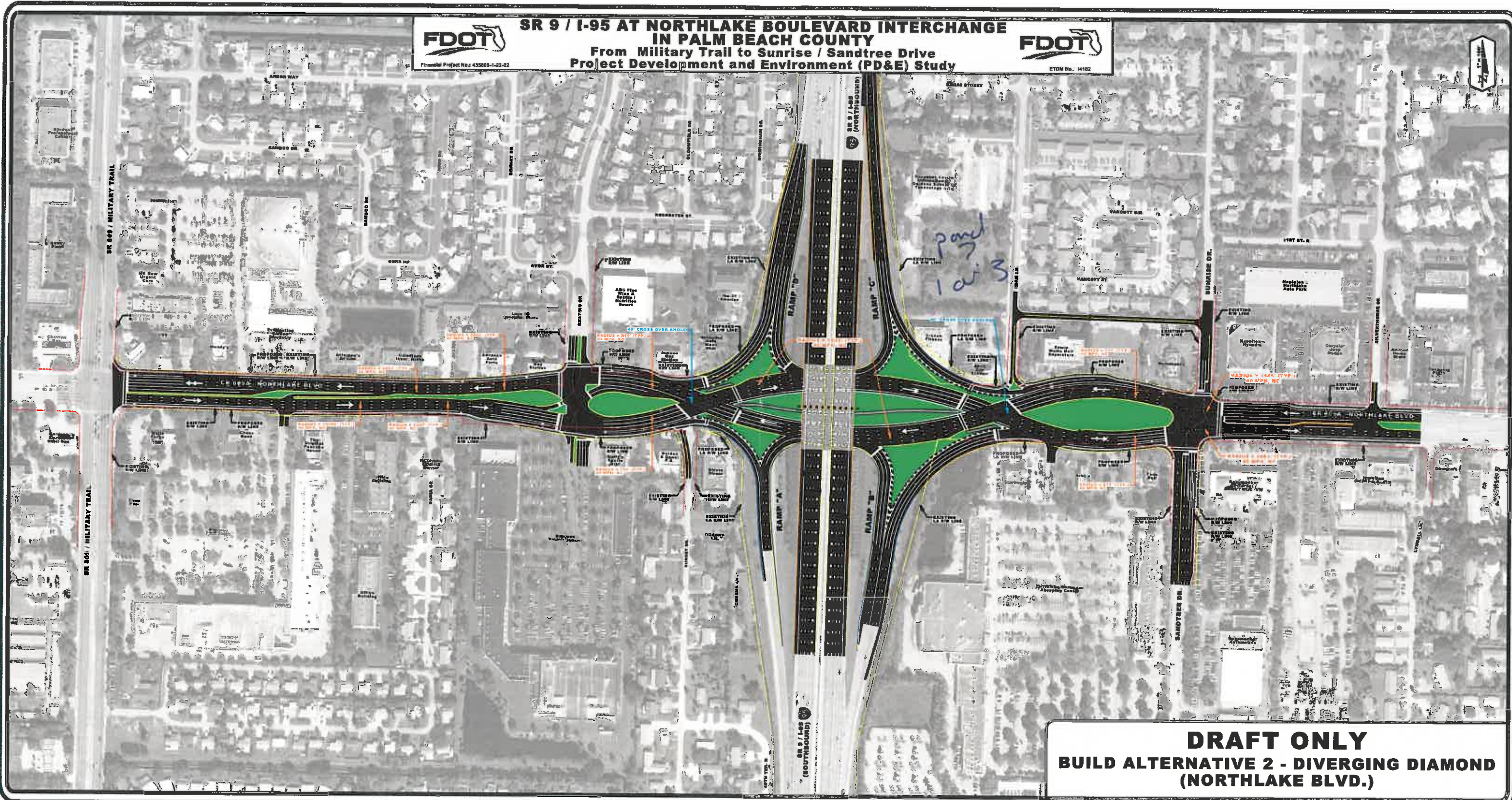
SR 9 / I-95 AT NORTHLAKE BOULEVARD INTERCHANGE IN PALM BEACH COUNTY

From Military Trail to Sunrise / Sandtree Drive
Project Development and Environment (PD&E) Study



ETDM No. 14182

Financial Project No: 435803-1-22-02



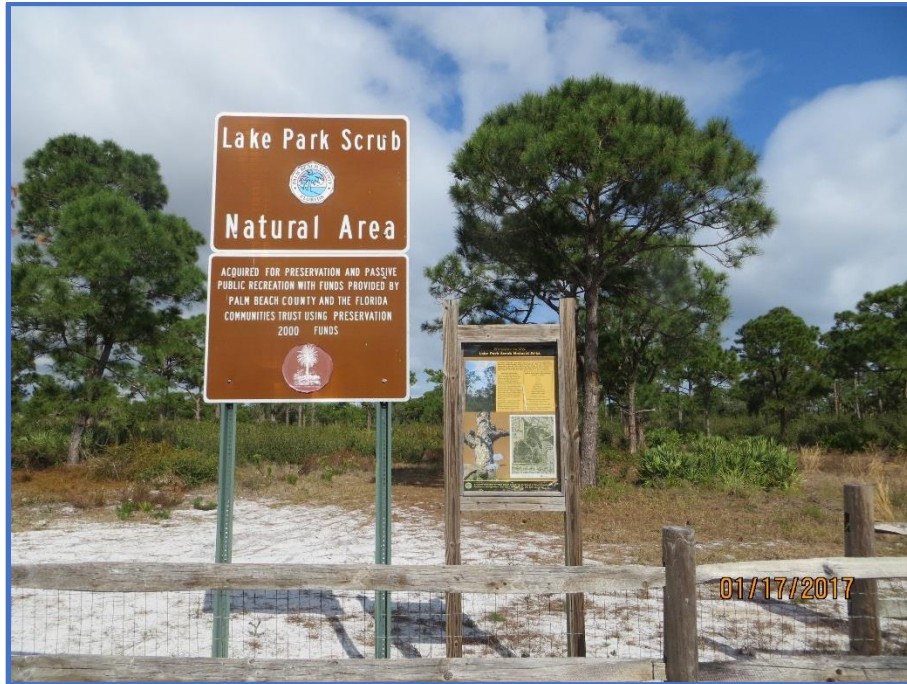
DRAFT ONLY
BUILD ALTERNATIVE 2 - DIVERGING DIAMOND
(NORTHLAKE BLVD.)





Appendix E

Photo Log



Photograph 1: Lake Park Scrub Palm Beach County Natural Area



Photograph 2: Existing groundcover vegetation at the Natural Area



Photograph 3: Existing shrub and canopy vegetation at the Natural Area



Photograph 4: Existing vegetation at the Natural Area



Photograph 5: Wet retention pond with planted cypress on the southeast corner of the Northlake/I-95 Interchange



Photograph 6: Wet retention pond with planted cypress on the southeast corner of the Northlake/I-95 Interchange



Photograph 7: Stormwater retention pond on the southeast corner of the Northlake/I-95 Interchange



Photograph 8: Cabbage palms in the drainage in-field of the southwest corner of the Northlake/I-95 Interchange



Photograph 9: Existing vegetation on the northeast corner of the Northlake/I-95 Interchange



Photograph 10: Existing vegetation on the northwest corner of the Northlake/I-95 Interchange



Photograph 11: Existing vegetation on the northeast side of the Northlake/I-95 Interchange



Photograph 12: Drainage feature on the northwest side of the Northlake/I-95 Interchange



Photograph 13: Existing vegetation on the northwest side of the Northlake/I-95 Interchange



Photograph 14: Existing vegetation on the northeast side of the Northlake/I-95 Interchange



Photograph 16: Earman River Canal on the north side of the Project Corridor, east side of I-95



Photograph 17: Earman River Canal facing northeast

Appendix F

Manatee Protocol

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.